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THE

NEW-YORK
MEDICAL AND PHYSICAL
JOURNAL.

EDITED BY

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AND

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SURGEON TO THE NEW-YORK EYE INFIRMARY.

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Art. I. Observations *on* Endemic Fever, *delivered as the Annual Address before the Medical Society of the State of New-York, at Albany, February* 2, 1825. By Alexander Coventry, M. D. President of the Society.

Gentlemen of the Society,

When I recollect the condition of the medical profession in this State thirty or forty years ago, I contemplate with great pleasure its present respectable standing. The favourable change has arisen from the laws regulating the practice of physic, and requiring preparatory study. But it cannot be concealed, that material defects still exist in the code; and it has been reserved for the patriotic legislature, now sitting, so to revise the statutes, as to place the practitioners of physic on a par with those in other sections of the union, and to enable them to keep pace with their fellow-citizens, in that career by which the State of New-York is attaining so marked a pre-eminence.

The proviso, in the 20th article of the act passed 10th April, 1813, to regulate the practice of physic, exempting those using roots, bark, or herbs, the growth or produce of the States, from the regulations of said act, as now used, or rather abused, is a disgrace to our statute book, and a stigma on a civilized people. It is unjust, as it is unwise. While the regular physician is made subject to several years of study, a set of impostors, whose impudence is only equalled by their ignorance, are allowed to rob and murder the good citizens, under the pretence of using only herbs and roots the produce of the country, although it is well known that they deal in the most powerful drugs in the shops, however ignorant, as they must be, of their composition and qualities.

There is a kind of superstition among our people, as to Indian skill in physic. This is a fallacy; their whole skill consists in exciting a violent perspiration, and plunging into the nearest river. You may as well tell of an Indian mathematician whose knowledge of numbers extends to his ten fingers, as of an Indian physician. The mist of prejudice is fast disappearing before our excellent system of education; the next generation will regard the present belief in Indian and root doctors with the same reverence that we contemplate the faith which our forefathers had in witchcraft and demonology. If there are any indigenous plants that will stand a comparison with those in our materia medica, (the qualities of many of which latter have been tested by the experience of centuries,) some individual of the profession will be found willing to distinguish himself by introducing it into practice. Men of experience will prefer using articles whose powers are well ascertained, to tampering with new drugs, whose qualities are not established. We may recollect the ephemeral celebrity of several medicines, fashionable for a while, now not heard of. For most purposes in regular practice, the present materia medica will be found abundantly sufficient; and, from the spirit of enterprise, and love of novelty, of our citizens, there is no little danger of crowding our pharmacopœias with useless and superfluous articles, and those of doubtful import.

When we reflect that this Society exists by statute, and take into consideration its peculiar organization, we cannot but regard it as entitled to the full confidence of the people, and of their representatives in the legislature. We meet here delegated from the schools, the seats of medical knowledge, and from the societies in the different counties; we are not elected by intrigue; no political or selfish purposes can be subserved by our selection; we are chosen by our professional brethren, our compeers, and competent judges of our claims. We cannot have a doubt but our recommendations will have due weight with an enlightened and patriotic legislature: with gentlemen of whom it may be said emphatically and truly, that they are the real representatives of the people. As such, let us appeal to them, that, by revising the law regulating our practice, they may protect their constituents against base and unprincipled practitioners, against ignorance and impudence, against all imposture, nostrums, and quackery. And where can this trust be more safely lodged than with medical societies, composed of gentlemen to whom are entrusted the preservation of their own lives, and of the lives of their wives and children.

I beg leave to call your attention to the innumerable patent medicines, whose virtues are blazoned forth and fill the columns of every newspaper. I boldly appeal to every medical gentleman present, if there can be any drug, or any combination of drugs, that would be applicable to any disorder, in all constitutions, or even to an individual, under all circumstances, while labouring under any particular disease. The use of patent medicine is therefore irreconcilable to common sense.

It was truly mortifying to see the names of two respectable professors in the oldest medical school in the Union recommending a certain panacea. We would also deprecate all American editions of English domestic medicine; we would prefer their cooking, to their medical practice; being convinced, from some experience, that the latter is adapted neither to our soil or our climate. Our country is well supplied with medical men: and while the parent is following the prescriptions of Buchan or Thomas, (often erroneously) the precious moments are lost in which the physician might have saved the child.

Our medical brethren in Connecticut did themselves much honour, by expelling Perkins from their society. The English College of Physicians have lately struck Dr. Thornton's name from their list, for countenancing Whitlow, who I suspect is practising on the cockneys with some plant he has picked up in our woods. We remember Whitlow's lectures on botany; some will not forget his scheme for propagating nettles. That a man might bodily enter a quart bottle, is quite as feasible as that Whitlow should understand any thing of physic. Yet this great genius had a dinner given to him in London, last spring, which was attended by some respectable men. But let us not be too severe on honest John, when we have faults of our own to mend. Have we not seen, among this enlightened people, certificates from professional men, the amount of which were, that fits of hysterics, or the frolics of a young girl, were mistaken for hydrophobia? We have in our time witnessed a prodigious waste of paper and ink to prove facts more incredible than the exploits of the veracious Baron Munchausen, and more wonderful than the miraculous prayers of the pious Prince Hohenlohe, the efficacy of which threatens destruction to the profession. Perhaps we might have doubted the evidence of our own senses, had we not heard of similar instances. Above a hundred infallible specifics have been discovered for the cure of canine madness; yet the disease, Anteus-like, rises invigorated from each defeat, and scarcely a week passes without hearing of its fatality. The celebrated Doctor Crouse conquered it with the false tongue of a foal, and the rust of a farthing. But a gentleman of equal ingenuity, and superior credulity, believes that the most dreadful disease that afflicts the human race, may be prevented and cured by plentiful potations of a tea very inferior in quality to that of catmint, the grand catholicon of dry nurses. It is our duty, as individuals and members of this Society, to protect our fellow-citizens not only against the art and deception of the wicked, but also against the weak judgment of those who, led astray by over-weening vanity, set themselves up as judges in matters of which they cannot possibly have a competent knowledge.

Gentlemen, I would now solicit your attention to some observations on the subject of the last year's address, which you will recollect was Endemic Fever. At that time I endeavoured to confine my observations to its remote cause.

On the present occasion, I will refer principally to the symptoms and treatment; and, pursuing my former plan, state to you my personal observations, which mode I prefer to recapitulating the opinions of others, with which you are as well, if not better, acquainted than I am. I cannot, however, omit mentioning a recent publication which I have perused with uncommon satisfaction. This is an Essay on Epidemic Fever, by Doctor Cooke of Frederick county, Virginia, which entitled him to a premium of one hundred dollars, liberally offered by the proprietor of the Medical Recorder, for the best Essay on Epidemic Fever. If I am not much mistaken, this gentleman describes the same kind of fever designated as endemic, in my address of last winter; and I cannot but flatter myself that some coincidence will be found in our opinions, which, living as we do some hundred miles apart, could only have arisen from a partial similarity in the locations where our observations were made.

In considering the symptoms of endemic fever, I shall notice them, 1st, As affecting the native or resident, one who has been acclimated, or has become gradually accustomed to the cause, and whose enfeebled frame seems incapable of violent re-action.

2dly, As affecting strangers arriving from healthy countries, where the cause of endemic disease is not known, in whose frame the phlogistic diathesis prevails, and in whom a violent re-action takes place, and proves the chief source of danger.

3dly, Where the highest degree of susceptibility in the subject, encounters the highest state of preparation on the part of the agent. It is known, that in those parts of our country where endemic fever prevails, it (generally speaking) commences at certain seasons of the year, and either finally stops, or is materially checked at other periods. Thus, even in the most unhealthy places, we hear of little disease till the middle of July, and, *communibus annis*, the cold weather or first frosts put a check to its ravages. In some seasons the disease continues into the cold weather; in those cases it seems to be the development of causes originating in the preceding autumn, for we know that disease will as it were lurk in the system, for months, or even a whole season, and at length be roused into action by some exciting cause.

In countries subject to endemic diseases, the inhabitants are exposed to the agent in a manner somewhat analogous to a person commencing with small portions of some poison, and daily increasing the doses, till the powers of life succumb, or the system is roused to violent re-action. But before either of these takes place, the individual feels the operation of the agent on his person, and the effect is cognizable in his external appearance.

From the personal experience of three attacks, I will endeavour to point out some of what may be called the premonitory symptoms. Some time previous to the chill, and varying according to circumstances, the individual will be sensible of general lassitude, a dejection of mind, a reluctance to exertion, languor, his appetite forsakes him, he feels a disgust even at the scent of animal food, his sleep is disturbed with frightful dreams, the bowels are costive, there is a dryness and nauseous taste in the mouth, especially in the morning; a dull head-ache, an aching in the small of the back, and the pulse is slow and feeble. I have found it intermitting, and in a few cases imperceptible. To a looker on, the countenance will appear dejected, of a dull sallow, sometimes of a leaden colour, the eyes sunk deeper, the pupils somewhat dilated, the adnata of a dirty yellow. The back-ache increases in severity till the chill takes place; this commences with cold in the extremities, horripilatic or goose-skin over the surface, and varies in degree, from being so slight as hardly to be noticed, to such violence and continuation as to threaten the life and sometimes to terminate in the death of the individual. The cold stage, however, generally after a time abates, and is succeeded by a burning fever, attended with a flushing in the face, red and suffused eyes, violent head-ache, a dry skin with a mordent heat, bounding pulse, a pain in the region of the stomach, nausea, at times efforts to vomit, but only a slimy mucus discharged. Should the attack fortunately be a paroxysm of an intermittent, after a time the skin becomes moist as the perspiration flows, and the febrile symptoms abate. If no diaphoresis takes place, the fever continues, with violent head-ache, much thirst, great anxiety, a weight at the præcordia, and sometimes a slight delirium through the night. In the morning a remission often takes place; the fever is not so high, but the thirst, hot skin, and pain in the head, continue; in the afternoon, an aggravation of symptoms, and increase of fever, again take place, and continue through the night, followed by another remission; the bowels during this period are constipated, and do not respond to ordinary doses of cathartics, and about the third or fifth day the vomiting becomes bilious, a diaphoresis appears on the skin, and the patient experiences some relief.

This is the common course in the milder cases. An evident intermission, generally a termination of the most alarming symptoms, takes place on the third, fifth, or seventh day, after which the sick begin to convalesce. The debility is, however, much greater than could reasonably be expected from the short period of the disease, and the system does not regain its usual tone till the accession of warm weather in the succeeding summer; in not a few cases, dropsies or rheumatisms are the sequels of the attack, and these, from the exhausted state of the system, often baffle the powers of medicine. In more severe cases, among the residents, after the third or fifth day, the adnata acquire a deeper yellow. This hue shows itself in the neck, spreading along the breast and shoulders, and at length occupies the whole surface; the vomiting and distressing nausea continue; from a bilious. the matter ejected acquires a brown colour; the tongue sometimes has a brown coat, and at times a fiery red appearance; the alvine evacuations are black, at times sanguineous; a clammy sweat appears on the surface, staining the linen yellow; the urine is in small quantities, and turbid; a slight delirium takes place; subsultus tendinum, and hiccup, succeed; the patient sinks into a coma, and death closes the scene; the corpse being invariably of a yellow, or rather deep orange, colour.

I have met with cases where there was no re-action of the system, but a complete prostration of the living principle, and in which the nerves appeared to have lost their irritability. These occurred chiefly when the disease was developed in cold weather; at which time the thoracic viscera seemed the seat of complaint. There was an intolerable oppression at the breast, a great difficulty in respiration, and ultimately an expectoration of mucus streaked with blood.

When endemic fever attacks a stranger, newly arrived from a healthy climate, in whom the phlogistic diathesis is prevalent, although he at first complains of lassitude, coldness, and nausea, and his pulse will be found slower, and skin cooler, than usual, these symptoms are soon succeeded by violent re-action, high fever, flushing of the face, redness in the eyes, intense pain in the head, throbbing at the temples, dry, parched skin, oppression at the præcordia, an indescribable weight and burning sensation at the stomach, with nausea; the pulse full, bounding, and generally strong; I say generally, for in some of these cases the power of life seems stifled at once, and there seems no effort made by nature. There is frequently a white fur on the tongue, and when the patient drinks to quench an intolerable thirst, his stomach rejects the liquid, and repeated efforts to vomit succeed; at first nothing but the usual contents of the stomach are brought up; after considerable straining, the bile passes off in quantities; and in the most malignant cases, where the emesis obstinately continues, a substance resembling coffee grounds is at last ejected. The first paroxysm will continue twelve, twenty-four, or thirty-six hours, when a calm, or remission succeeds, but this too often proves deceitful, and another storm succeeds; in these cases the urine is in small quantities, nearly obstructed, sometimes passes involuntary, and an obstinate costiveness prevails. Too often, during the violence of the paroxysm, obstruction or effusion takes place in some vital organ, a derangement of structure follows, the skin becomes yellow, then orange, and inclines to a mahogany hue. If the individual survives the fifth day, and a gentle perspiration appears on the skin, with copious discharges of dark coloured fæces, some hopes of recovery may be entertained.

During a residence of five years in the lake country, I have no recollection of a case of fever that assumed the typhoid type; and I believe, where endemic fevers are prevalent, as in the East and West Indies, or even in the Southern States, particularly in the warm season, typhus is of rare occurrence. Endemic fever, in those districts where the causes exist, seems to run a short course, in which the patient either sinks or soon convalesces. It would seem that the deleterious air becomes necessary to the due support of those accustomed to it, for I have more than once observed, that the natives of swampy and unhealthy districts were apt to droop and decay when removed to the purer air of the hills, where endemic disease was unknown; there seemed to be something wanting to keep up excitement, like alcohol to the drunkard, or tobacco to the habitual smoker.

I have reason to believe, when the foundation of disease has been laid among marshes, or arises from endemic causes, but the fever developes itself in healthy locations, that the paroxysm commences with more violent re-action, the disorder is apt to run a more protracted course, and towards the last, assume the appearance of typhus. I am aware that gentlemen high in the profession maintain that typhus is a specific disease, and depends on a contagion sui generis; this was the faith in which I was educated, and most religiously believed. My first acquaintaince with typhus was in crowded and unclean abodes, or rather polluted dens, among the narrow and ill-ventilated alleys of the city, where I have seen more than one family, of which the simple picture drawn by John Hunter, and quoted by Doctor Good, is a faithful representation. In these cases, I have witnessed one after another of a large family take to the sick bed, and had no doubt but contagion was the agent. But my former opinions have received some violent concussions from many stubborn facts which have occurred to me during thirty years' practice among the sparse population of a newly settled country, where I have met not a few cases of typhus distinctly marked from the commencement, occasioned at times by excessive fatigue, exposure to wet and cold, &c. where no possibility of contagion could be traced. Nay, I feel warranted in asserting, that in the district where I now reside, it is not uncommon to see a fever commence with high arterial action, such as is common in those cases generally denominated bilious remittent, and in a few days assume the typhoid type. There is little or no analogy between this fever, typhus, and those diseases called contagious. The fever has no stated period; and I am much deceived if I have not seen repeated attacks in the same individual—but I am travelling out of the record; my present business is with endemic fever.

In the third division, which comprises the most malignant cases, the early symptoms are modified by the previous state of the patient; in the young and robust, after a slight chill, or only a crawling sensation of cold, a violent re-action commences, attended with high febrile commotions, face flushed, eyes inflamed, skin hot, pulse strong and frequent, and sometimes a pungent burning sensation, and an insupportable oppression at the præcordia, with ineffectual efforts to vomit.

When this tumult of the system is over, too often evidences remain that irreparable mischief has taken place in some vital organ, generally either the brain or stomach. In weak and delicate frames, the period of excitement is absent, and from the beginning their symptoms agree with the collapse of the robust; the skin has a dark, leaden appearance, feels cold and flabby; the pulse is weak, and slower than natural, often intermitting; a torpor seems to have taken possession of the nervous system, the nerves have become insensible to the usual stimulants; the secretions seem to be arrested; the secreting glands refuse to perform their office; the urine is in small quantities, or totally suppressed; the prima via will not respond to common doses; even the liver has lost its tone, and little or no bile is secreted. Meanwhile the patient seems insensible of his danger; he does not complain, except perchance of a bad feeling at the epigastrium.

Whilst the nervous sensibility of the system seems materially impaired, the power of voluntary motion often remains in a remarkable degree. I have seen a patient raise himself from the bed, stand erect, and even walk across the room to the close stool, with no perceptible pulsation at the wrist, his extremities bedewed with a clammy perspiration of the coldness of ice, and death depicted on his countenance. Even at the commencement of these malignant cases, there is something in the eye, in the face of the sick person, which cannot be well described. A lurid, wild, semi-delirious glare of the eye, a mottled, purplish yellow hue in the skin, which, to the experienced, predicts, too truly, a fatal event, excites our sensibility, sinks our hearts to despair, and sometimes creates a despondency not warrantable in our profession. In fatal cases of this division, not unfrequently a dark coloured matter is ejected from the stomach, often by eructation, and if the bowels become soluble, either dark venous blood, or this matter, passes off involuntarily, and the patient sinks quietly into the arms of death.

Before entering on the treatment of fever, we may devote a few minutes to the best means of preventing its accession; and if I have not deceived myself, this may be frequently achieved by pursuing a proper course.

Whenever the resident of a country in which endemic disease is likely to prevail, feels indisposed, particularly in the sickly season, if he perceives any of the premonitory symptoms formerly spoken of, without loss of time he ought to apply to a physician, whose duty it will be to prescribe a cathartic, and the best for the purpose is the usual composition of calomel and jalap. While under its operation, the patient should drink freely of some mild liquid, chicken water, beef tea, whey or barley water; the use of solid animal food should be omitted for a few days, during which a gentle diarrhœa should be kept up, by small and repeated doses of the same medicine; or should there be any danger of ptyalism, (always unpleasant, and seldom necessary) the sulphate of soda may be employed after the first dose. I can recommend this common medicine from much experience, and esteem it only second in power to mercury in emulging or relieving the chylopoietic viscera. After keeping the prima via lax for several days, the patient will feel relieved, and may safely venture on the cinchona, of which three drachms or teaspoonsful may be taken every day. And this medicine may be continued through the sickly season, observing to avoid a costive habit, shunning the night air, and sparingly using animal food. The sulphate of quinine is an excellent substitute for the bark, and croton oil may be used as a laxative.

A most respectable gentleman informed me, that while residing in South Carolina, he became acquainted with a wealthy planter, who had not left his plantation in the sickly season for many years, although all his neighbours emigrated annually during the hot months. The only precaution used was a small dose of Glauber's salts every morning, during the period of fevers.

The extension of the Union to the mouth of the Mississippi has greatly increased the intercourse between the north and south. The independence of Spanish America will afford new attractions for our citizens to unhealthy situations. Those who intend to visit or remove to a warmer and more sickly climate, ought to select that period of the year which with safety will afford them a partial seasoning, previous to the access of the sultry season in our Southern States. The month of November is the best for the emigrant to arrive in;

he will be partially acclimated by July and August; and if he does not wholly escape sickness, his attack will be less severe, and the disease of a milder type. To those whose necessary business compels them to visit a southern climate in warm weather, a certain kind of preparation would be of great service. For some time previous to, and during the voyage, the proportion of animal food should be lessened, spiritous liquors avoided, the bowels kept rather lax, and if no particular idiosyncrasy forbid, calomel taken in small doses combined with jalap, scammony, gamboge, or the croton oil. It would be desirable that the system should be under a gentle influence of mercury, on the arrival at the place of destination. About thirty years ago, a friend, a sea captain, informed me, that in one of his voyages from New-York, when he arrived at the West Indies, every man of his crew were under the influence of mercury. The vessel lay some weeks, I think at St. Pierre's, Martinique. It was a very sickly season; every vessel but his lost some hands; several, their whole crews; but not one of his men had the fever. At the taking of Omoa, on the Spanish Main, the British squadron suffered severely by fever; but it was remarked, that of a number of men employed to collect with their hands some quicksilver spilt from the jars in a prize-vessel, not one sickened, although surrounded by the dead and dying.

When a person in health arrives from a northern district at a southern port, in hot weather, he ought to be bled copiously, and make use freely of cathartics; the efficacy of this plan was proved in a detachment of Dutch artillery, composed of robust young men. On their approaching the island of St. Domingo, the lancet was used, and powerful cathartics were given to every individual. At the expiration of four months, of one hundred and five men only two had died. No precaution had been taken with the crew of the transport, consisting of twenty-eight; of these eight had died at the expiration of the period.

In speaking of the treatment, I wish to have it understood that my desire is to confine myself to endemic fever, which, in my opinion, requires a course of management different from what might be proper in pyrexia taking place in healthy countries, where transient causes operate on vigorous and robust habits, and the morbidly increased action principally constitutes the disease.

In districts subject to endemics, the tone or excitability has been exhausted by continued and excessive heats; the temperature of the body is found three or four degrees lower than that of a stranger, and the resident is enfeebled by breathing for months a poisonous air. During the disease, the deleterious agent continues in full operation, and we must calculate on, and endeavour to counteract its effects. While we endeavour to allay tumult in the system, we must not so far reduce the patient as to leave him a prey to the combined influence of the cause, and the exhaustion that invariably succeeds over excitement.

A residence for some years in the lake country, induced me to relinquish the practice which I had been taught, and seen employed by the first medical man of his age. I here found my favourite theory entirely at fault, and neither bleeding or sweating would restore health, or prevent a yellow skin. The use of the lancet has been in and out of fashion by turns, in febrile diseases, for twenty centuries: now the Ægis of security, and now the infallible messenger of death; in discreet hands, a useful and efficient instrument; used without discretion, scarcely behind the brandy-plan of Brown, whose closet speculations were for many years more propitious to American grave-yards, than war, famine, or pestilence.

The present high standing of the lancet, may be in some measure attributed to the writings of the medical men attached to the European armies, who during a war of twenty-two years, had ample opportunity of testing the usefulness of venesection, among the robust young men, natives of healthy countries, who composed the materiel of these armies.

The British army and navy surgeons also found depletion indispensable, to reduce the plethoric and inflammatory diathesis of Europeans, on their arrival at stations within the tropics.

If I might speak from some observation, I would state, that in much the greater part of the Union, more caution is necessary in using the lancet, than in northern and middle Europe, where a milder sun, and purer air is prevalent. I have witnessed more than one case, where my opinion was, that the loss of blood accelerated the death of the patient.

In endemic fever, however necessary the use of the lancet may be in some subjects at first, a repetition is seldom requisite, as it may be productive of a protracted convalescence, or lay the foundation of dropsy.

Diaphoretics, from which I had formerly found much benefit in febrile cases, appeared useless in endemic fever, and experience taught me, that although the nausea seemed to indicate emetics, they too often aggravated that intolerable oppression at the epigastrium, prolonged the distressing retching, and increased the determination to the head, where the agony was already insupportable.

I will briefly state the plan I adopted after being taught by the experience of several seasons. When called to a patient, in the first place I endeavoured to discover the cause, and if possible have it removed, or the patient was taken to a greater distance from it; too often, neither was practicable, and sometimes the agent not cognisable. When the patient was still in the state of depression, if this was extreme, I commenced by exciting the vital powers, and found the warm bath, with frequent doses of ether, the most serviceable. With the latter I gave alternately portions of calomel, if the stomach was irritable, alone, or combined with cathartics, jalap, gamboge, or scammony; but if reaction had already commenced, and was threatening the patient with serious injury in some vital organ, and if the patient was young and robust, I opened a vein, and let the blood flow till the system felt the effect. When no local determination forbade, and the skin exhibited that pungent dry heat, cold effusion was had recourse to, and repeated as often as the heat of the surface seemed to demand. This is a powerful agent when judiciously used, and persevered in, if the state of the patient will admit of it, and when resorted to early, few febrile cases will withstand it. Should circumstances not allow of its use, as in low cases, our chief dependence is then on mercury, which in fevers, is the sheet-anchor. This potent medicine acts in a double capacity, as an excellent cathartic and deobstruent, exciting and as it were emulging the chylopoietic glands, and at the same time raising a specific action in the system, which subdues and regulates those abnormal motions constituting remittent fever.

I have at times been in doubt, whether the cathartic or alterative powers of calomel were the most to be relied on. The experience of many years has taught me to hail the appearance of mercurial action in the system, as an almost unerring harbinger of safety to my patient. The presence or effect may be readily discovered by the pulse, the gums, or the breath, before ptyalism takes place. This latter ought to be avoided, as troublesome and unnecessary; but the facility with which some constitutions are affected, will at times baffle the most cautious treatment.

In such cases as will not admit of the mercurial treatment, I have derived much benefit from free and continued purging. It was the observation of nature, that led me to this course. I had observed that persons seized with a diarrhœa, or even cholera morbus, generally escaped a run of fever; and instead of checking a lax, I promoted it, especially in the autumnal months, and when nature seemed reluctant or defective, the aid of art, was called in. In the variety of medicine used for this purpose, I found the most benefit from a solution of the sulphate of soda in cinnamon water, with a small quantity of tartarized antimony, desiring the patient to drink plentifully of barley or tamarind water.

The patient, instead of being exhausted by a course of purging, will find his strength increase. This I have experienced in many instances, one of which I will take the liberty of mentioning.

In 1814, a militia man from Montgomery county, contracted endemic fever at Sacket's harbour. On his return, unable to proceed, he stopped in the vicinity of Utica. I found him worn out with disease, his eye yellow, countenance bad, pulse rapid, tendons playing, and a slight delirium. He had also the fluxus castriensis, but was unable without assistance, to walk to the stool. I left him twelve powders composed of camphor, nitre, calomel, and a small quantity of tartarized antimony. Being called to a distance, and detained, I did not see him again till the expiration of thirty-seven hours, when I was not a little surprised to find my patient sitting at supper, apparently in health, and eating with tolerable appetite; the delirium and subsultus had disappeared, and he was able to walk without assistance. The directions had been religiously followed, a powder every second hour, although every dose had in 10 or 15 minutes operated as a powerful cathartic. Had I been present, the medicine would not have been continued, and probably the person would not have been able to proceed as he did next morning for his home.

In the Annals of Medicine, Vol. I. Dr. Brice states that he has often seen a man carried out perfectly delirious, with subsultus tendinum, and in the state of the utmost apparent debility, who after one or two copious evacuations of this kind, has returned of himself, composed and astonished at his newly acquired strength.

To the justice of Dr. Hamilton's remarks on the use of purgatives in fever, I could bear the most ample testimony, and it was with great satisfaction I first perused his excellent work.

Where no objection exists, the preference should be given to calomel as a cathartic; in many cases it is the only medicine that can be employed for that purpose, as the stomach will, from excessive irritability, reject every other, but seems incapable of raising this, and if given in moderate but repeated doses, it will find its way along the intestinal canal. The catharsis must be kept up, till the dark fæces are replaced by those of a more natural colour, and should the system in the meantime afford obvious signs of being duly imbued with the mercury, that medicine should be omitted, and other laxatives used, as the neutral salts in an infusion of senna, the ol. ricini, or a preparation of the croton oil.

It will be understood, that it is only at the commencement of fever, that we strongly advocate the mercurial treatment; after a certain period the system appears to become insensible to this medicine, and toward the latter period it seems injurious. When the febrile action has subsided, and the fur disappears from the tongue, the strength of the patient must be supported by wine, and for this purpose genuine Madeira is the only suitable kind; in a short time to this may be joined the cinchona, either in decoction, or in the admirable form of the sulphate of quinine, united with some pleasant aromatic, as cinnamon. After endemic fever, there is generally a voracious appetite, and more relapses occur from over eating than from any other cause.

In illustration of the treatment I prefer, in the case of strangers from healthy districts, when exposed to endemic fever, I will state a case which occurred in my practice. On the 10th September, 1815, I was called to visit a young man of a full habit and robust form, who had never been sick before; he had just returned from the Cayuga marshes, having been a boatman on the Seneca river. His face was flushed like scarlet, eyes red, terrible head-ache, and full bounding pulse. A vein was opened in the arm, and nearly two and a half pounds of blood flowed before he grew faint. He now took a full dose of calomel and jalap, but the heat and re-action re-appearing in about an hour, he was placed on a chair before the door, and two buckets of water from a spring poured through a sieve on his head; the shock was great, he went to bed with a chill; orders were given to repeat the effusion, should the heat return; next morning he was evidently better, had got some sleep, but the skin being still hot, and the pulse rather strong, twenty ounces more were drawn from the arm, and in about an hour after, the cold effusion repeated, and strict orders were given to repeat it if the skin became hot and dry, his cathartic had operated, and he continued to take lessened doses. On the third day he was convalescent, and the mercury stopt.

In several cases which appeared, similar to that stated, I have found much benefit by opening the temporal artery, and allowing twenty or thirty ounces of blood to flow: but this quantity will not be obtained without the caution, not to cut off the vessel, till you wish the flow to stop. Where there appears much determination to the head, sixteen ounces taken from the artery will give greater and more immediate relief than double the quantity from the arm, and avoid the danger of inducing debility by repeated venesection at the arm. I have found arteriotomy particularly useful in those attacks where the danger arose from the fever assuming a typhoid state. It will often remove the oppression on the brain, and does not exhaust the strength. When a European, or a native of New-England, on his arrival during the summer or autumn, at a place subject to endemic disease, is attacked with a fever, a free use of the lancet is indispensable. The re-action must be kept within bounds, or some vital organ will be irrecoverably destroyed; but this must not be resorted to till the state of re-action commences, either by the efforts of nature, or the aid of medicine.

In the third or last division which may be justly denominated malignant, where the state of the patient and the power of the agent combine to entitle the case to that appellation, we meet with disease in some instances where the powers of life succumb to the overwhelming forces of the agent, and nature yields without a struggle. These cases are marked with a feeble pulse, a difficulty in breathing, an intolerable agony and oppression at the breast, a purple hue on the surface. Under these circumstances, our first indication is to rouse the energy of the system, and to restore nervous sensibility; for this purpose the warm bath holds the first place, to be followed by friction with volatile linament combined with tincture of cantharides, and at the same time exhibiting internally doses of sulphuric ether, alternated with potions of calomel and jalap, occasionally assisted by enemata. If we are so fortunate as to arouse the vital energy and induce a brisk catharsis, we may entertain some hopes of the recovery of our patient; the calomel ought to be continued, and the catharsis kept up till the evacuations lose the dark hue, and the appearance of mercurial action in the system affords reason to believe that the disease is conquered. In these low or sinking cases the lancet is a dangerous expedient, and I have witnessed fatal effects from its use.

In other instances of this class, after a slight chill, or only a crawling sensation of cold, in stout and robust habits, a violent re-action commences, and if this is not immediately moderated, some organ essential to life is irreparably injured. Those which most frequently suffer are the head and stomach.

Should the brain be threatened, which may be known by the deep flush of the face, the redness of the eyes, beating at the temples, intense head-ache, and not unfrequently delirium; the temporal arteries ought to be opened, cupping or leeches applied to the temples, the cold effusion repeatedly used, the head shaved and cold, or, if procurable, iced water kept on the head, and calomel freely exhibited. Should the stomach appear to be the organ in danger, copious depletion at the arm, cupping or leeches at the epigastrium, followed by an extensive blister over that region; and here the tepid or cold bath might be preferable, and mercury introduced by friction on the surface, the blue pill by the stomach, or even by enema.

In the course of this and my former address, I have submitted to you the result of many years' experience and observation on the subject of endemic fever. Whether it appears in a ship, from a decaying cargo or foul hold: has its origin in the filth, and narrow unventilated lanes of a city: in the accumulation of that filth among the basins, slips, and docks of a sea-port, from the perishable materials on which new streets are founded: or shows itself among the ponds, marshes, and stagnant pools of the interior—the cause is the same: and will be found accompanied by vegetable or vegetable and animal putrefaction. To induce or promote this process, heat and moisture are the principal agents; hence it prevails most in those countries where these agents operate powerfully, and find pabulum to act on. The effects are so varied by the idiosyncrasy of the individual, and the intensity of the agent, as to induce some respectable physicians to make distinctions where there is no difference. Had I only seen endemic fever as I met with it on the well cultivated banks of the North River, where, among the intermittents and mild remittents, erroneously called bilious, I do not remember to have seen a yellow skin during a residence of six years, I might have thought that the city endemic was a different disorder.

But having witnessed its effects in a district where the agent was much more powerful, I cannot agree to the distinction made; and I can positively affirm, that if the fever which prevailed in New-York during the summer and autumn of 1795, was yellow fever, then yellow fever is identically the same as the endemic fever of the interior; many cases of which latter I have seen more rapidly fatal, than several which were pointed out to me in the city as genuine yellow fever. Why a cause of equal intensity should operate differently in the air of the city, I cannot see. The symptoms pointed out as characteristic and distinctive of yellow fever, are exactly those most frequently found in the fatal and malignant cases of country endemic. For the truth of this, I might appeal to every gentleman who has practised in a country subject to endemic fever: but instead of detaining you on this topic, I will refer you to the writings of Lancisi; the almost innumerable facts recorded in the Medical Repository; the investigations of Doctor Bancroft; the statements of Drs. Musgrave and Ferguson; those of the veteran Jackson (not of the West Indies, as the Medical Recorder has it); Dr. O'Halloran; an excellent memoir by Professor Potter of Baltimore; the opinion of Dr. Rush, who so sincerely regretted having ever entertained or published his first erroneous doctrine; and, lastly, that excellent essay of Dr. Cooke, contained in the 27th Number of the Medical Recorder. The idea of contagion and importation is now so completely abandoned, that it would be an act of supererogation to dwell on the subject. Yet I cannot forego the opportunity of testifying the pleasure and satisfaction with which I perused observations on the fever that appeared in our capital, during the season of 1822, by our colleague, one of the editors of the New-York Medical and Physical Journal, No. VIII. It appears to me that no mind can be so callous, no bigotry so fixed, as to resist the incontestable facts, the clear, sound, and logical reasoning founded on them, and still believe that the fever, which afflicted the citizens of New-York, was contagious, either in, or beyond the infected district. It appears to me that the contagionists must henceforth abandon their dernier resort, their strong hold, the infected district, or consent to be considered as labouring under a state of hallucination, which all the hellebore in the union could not cure.

When we look forward to the future destiny of our capital, we cannot but esteem the question of the origin of yellow fever as a subject of the deepest import, and consider every elucidation on this point, as an accession to sound philosophy and the cause of humanity. We have therefore read with great pleasure, an Essay on Epidemics, by the scientific editor of the Philadelphia Medical Journal. The learned professor rejects the idea of importation and contagion, and ably contends for the domestic origin in vegetable and animal putrefaction. The acknowledged talents of this gentleman give no small value to his opinion. We stated, some years ago, that it would be from American physicians that the profession would receive correct information on this subject.

It must appear evident to any man capable of reasoning, that a city favourably situated, may be kept more healthy than an equal extent of surface in the country. In the former, putrescence may be at all times prevented; in the latter, vegetables must grow, and will occasionally decay. For several seasons there has been less sickness in Philadelphia than in the adjacent country. Charleston in South Carolina has long been the summer residence of the planters.

I know of no place so capable of being made conducive to health and longevity as the city of New-York, if under a judicious and strict police, and well supplied with wholesome water; for, as our excellent first magistrate justly observes, "without good water, there cannot be good health." Water is essential to cleanliness, and this constitutes the best guarantee against sickness.

ART. II. *An Account of the Small-pox, Modified Small-pox, and Chicken-pox, which prevailed in the City of Albany, during the months of February, March, and April,* 1824; *with Remarks upon the identity of these diseases, and upon the anti-variolous power of Vaccination.* By LEWIS C. BECK, M. D. Lecturer on Botany. Albany, New-York.

THE diseases which form the subject of the following remarks, have, for the last few years, excited much attention among medical men, both in Europe and America. In the course of their investigation, many questions have arisen, which are full of interest to every individual of the community. Entertaining an opinion, that no facts which have the least bearing upon them should be concealed, I have been induced to present to the public the results of my observations.

During the months of February, March, and April, 1824, small-pox, modified small-pox, and chicken-pox, prevailed in our city to a considerable extent; and, through the liberality of my fellow-practitioners, I had an opportunity of visiting most of the cases from day to day, and of noticing their commencement, progress, and termination. A few, however, escaped my notice, and of these I obtained authentic accounts from the physicians in attendance. Thus, from my own notes, and from those which have been furnished me by other medical gentlemen, I am enabled to present a history of nearly all the cases which occurred during that time.

In the record of these cases, I shall, as much as possible, study conciseness, and shall only detail those which are interesting in themselves, or which are thought to have a bearing upon the remarks which follow, concerning the identity of these diseases. I shall afterwards offer a few observations upon the anti-variolous power of vaccination.

Before proceeding to the immediate object of this paper, it may be remarked, that during the summer of 1823, a few cases of small-pox occurred in this city, which were said to have been introduced from Canada. They, however, excited no alarm, and the disease shortly disappeared. During the autumn, chicken-pox was also somewhat prevalent, and it was observed at intervals during the months of December and January. But, considering these as ordinary cases, I paid no attention to them at the time, nor have I since been able to obtain any correct account of them.

The first case of genuine small-pox which occurred during the winter, was that of John Johnson, alias Martin, a coloured man, aged 25, who resided in Pearl-street (southern part of the city). Eight or ten days previous he had been on a visit to New-York, while the disease was prevailing in that city. He was attacked on the 27th of January, with pains in the head, back, and limbs, nausea and vomiting. His pulse indicated much febrile action. On the 30th, a numerous, though distinct eruption appeared on his face, and gradually extended to the body and extremities. On the 2d of February the eruption became pustular and confluent, and the patient complained of great soreness of the throat. 6th, (eighth day of the eruption,) the eruption was complete, and the fever was assuming the typhoid type: the patient was almost entirely deprived of sight. 7th, (ninth day of the eruption,) a brownish crust began to appear on the pustules, and they discharged large quantities of fœtid matter. This discharge continued for several days, and such was its acrimony, that nearly all the pustules on the face were united into one. Large patches were also formed in a similar manner on the body and extremities. During all this time the soreness of the throat and the blindness continued. On the 14th of the month (sixteenth day of the eruption) the scabs began to fall off, leaving deep, irregular pits, and the patient gradually recovered.

This individual had not been in any way protected. It is worthy of remark, that the wife of the patient escaped the disease, although she was unprotected until the day the eruption appeared on her husband, when she was vaccinated.

The next case of small-pox was that of a lad, seven years of age, residing in Lumber-street, in the northern part of the city, about a mile from the former. He was taken ill on the 3d of February. For two or three days the stomach and bowels appeared to be the only parts affected. Every thing taken into the former was instantly rejected, while the latter were obstinately costive. On the third day an eruption appeared, which in a few days became pustular and confluent: it was attended with much fever. On the 12th of February, (eighth day of the eruption,) the pustules on the face began to dry up, but on the body the whole cuticle scaled off. Typhoid symptoms now supervened, and the case terminated fatally on the 15th.

This child had never been in any manner protected. He contracted the disease, as it was thought, by visiting a boy who resided in this street, and who had, a short time previous, while afflicted with small-pox, removed hither from the vicinity of Troy. There were five other children in this family, who had never been properly protected until the eruption appeared on the child above mentioned, when they were all vaccinated. Not one of them became affected with small-pox. Here, then, is conclusive evidence of the value of vaccination, even after exposure to the contagion of small-pox.

The three cases which I am now about to detail, have been the cause of much dispute among the physicians; some contending that they were cases of genuine small-pox, others that they were not. The principal ground upon which the latter rested their opinion was, the difficulty of ascertaining from whence the contagion originated. They were all strangers, recently arrived in the city, and had taken lodgings at a small inn in Pine-street, near the Academy Square. I am induced to believe, however, that after the history of these cases has been given, and a few facts stated, there will be but little difficulty in settling their true nature, or their origin. I regret exceedingly that I had not an opportunity of visiting them; but the accounts of them which I am about to give, were communicated to me by Dr. Church, who visited them frequently during their illness.

——— Cutter, aged sixty-three, was attacked on Thursday, the 12th of February. The night previous, he had been out late with his companions, and when he arrived at his lodgings, the doors were closed; and being unable to get admittance, he went to a barn, where he remained during the night. When he awoke in the morning, he complained of being unwell; said he had severe pains in his loins and a sore throat, which he attributed to his exposure to the cold.

On Monday the 16th, (the fifth day of the attack,) when Dr. C. first saw him, his face was of a deep crimson colour, and very much swollen; eyes red and watery, and nearly closed, from the swelling of the face. On his neck were observed two or three small papillæ, with a little whitish fluid in their apices. On his trunk and extremities was an efflorescence, which appeared in distinct and irregular patches, nearly resembling that of scarlet fever. His respiration was a little laboured, and somewhat quicker than natural, attended with a rattling in his throat. He expectorated copiously and easily; the fluid resembled pus, and seemed to be secreted about the larynx and upper part of the trachea. Notwithstanding his expectoration was so free, it gave the patient very little relief, as there was an immediate re-collection of matter. In addition to these symptoms, he complained of soreness of the throat, feet, and palms of the hands: tongue loaded and clammy; pulse but little accelerated, soft, and rather weak.

Tuesday, 4 o'clock. The patient's face remains swelled as yesterday, but it has assumed a purple hue. On the end of the nose the cuticle is detached, and an effusion of a dark sanious fluid appears. This part had been white, as if frost-bitten, when the rest of his face was of the deepest red. An effusion of bloody serum has now commenced on different parts of the body and extremities where the efflorescence appeared, and has raised the cuticle into large bullæ, from the size of a sixpence, to the extent of two or more inches in length and an inch in breadth. Pulse quick and weak; respiration short and laborious, attended with rattling in the throat, from the accumulation of matter in that part, and which he is now unable to throw off. He is in a deep coma, from which he cannot be roused without much difficulty, and when roused, is unable to articulate. He died at 5 o'clock.

——— Warner, aged thirty-seven, was taken ill on the evening of the 16th of February. The first symptoms were those of a catarrh, accompanied by pains in the head, back, and loins. Nausea and vomiting occurred several times during the course of the night. The next day the symptoms were much abated, and the patient was greatly relieved.

Friday, 20th of February. The patient is sitting up, and is able to walk about the room. There is a numerous eruption of small papillæ over the whole body, which are partly filled with a whitish fluid. The eruption is most numerous on his face where it first appeared. Pulse about 70, soft and weak; respiration natural; tongue moist and furred; skin of its natural temperature.

Saturday 10 o'clock A. M. The eruption is less prominent than yesterday; the apices of the papillæ are flattened, and the cutis over them loose and flabby; pulse about 70, and very weak; tongue covered with apthæ. A tremor of all the limbs, and alienation of mind.

He was removed from the city in the afternoon, and died the same evening.

——— Church, aged forty, became indisposed on Tuesday the 17th of February. Dr. C. visited him at 3 o'clock on Friday, and at this time his face was red and much swelled; eyes suffused and inflamed; pulse somewhat accelerated, full and soft; respiration hurried; tongue moist and clammy. Petechiæ were observable on different parts of his body, and extremities, and ecchimoses, as if he had been bruised, or severely pinched.

Saturday, 2 o'clock P. M. The swelling of his face has subsided, but he assumes a cadaverous appearance. Cuticle detached in various parts. Petechiæ increased in number and extent, and are of different colours; some being light purple, some brown, and some nearly black. Tongue trembling when put out; tremors of the limbs; mind confused. There was also a slight papillar eruption on his neck.

The patient was removed the same day with Warner, and died the succeeding night.

It should be observed that these persons were all of irregular and intemperate habits.

From a review of the history of these cases, the symptoms appear to be similar to those of malignant small-pox; and their malignity may be accounted for when we take into consideration the ages and habits of the patients. Other circumstances also had a powerful effect in aggravating the disease; such as the confined state of the air of the room, and the repeated use of brandy and other liquors, during the first days of their illness, and before any physician had been sent for. It was thought by some of the physicians who visited these individuals, that the eruption was different from that of small-pox, and that death ensued much sooner than is usual in that disease. But it has long since been remarked by writers upon small-pox; that the degree of its malignity depends greatly upon the disposition of the body to which it is applied. We have in the cases above detailed, most of the characteristic symptoms of small-pox; a genuine papillar eruption appeared in every case, but it was slight, and the petechiæ which supervened prevented them from proceeding to maturity. Cases of a similar kind have been recorded by many writers upon this disease. The following remarks from Van Swieten's commentaries upon Boerhaave are in point. After observing what a bad omen the purple spots which appear in the place between the pustules are to be held, he adds, "Hence Sydenham condemned them, as almost always the forerunners of death ; as they betoken a gangrenous disposition in the blood, and have never been found to accompany any small-pox but such as proved in the event of the worst kind. He has, however, known them to vanish, when they proceeded merely from the excessive feverish hurry of the blood, as soon as that hurry was checked. We have another case, in which a patient, who had these spots upon him, recovered notwithstanding. After all, it is the general opinion amongst physicians, that these spots indicate a very dangerous disorder ; and, in the variolous fever, *such spots have been observed, even before the small-pox pimples themselves made their appearance ; and the issue was a speedy death.*

" There sometimes break out, intermixed with the small-pox pimples, miliary exanthemata, both red and white. Though no eruptions of this kind can be reckoned among the good signs, and are an addition to the already sufficiently troublesome symptoms of the small-pox ; nevertheless, as these exanthemata are no signs of a gangrene, we need not be so much alarmed at them as at the purple spots ; accordingly I have seen several persons who had them in the small-pox recover notwithstanding."—*Van Swieten's Commentaries upon Boerhaave*, Vol. XV. pp. 187, 8. Edinburgh edition.

From the above, it follows that miliary exanthemata, purple spots, &c. are frequently observed intermixed with small-pox pimples, and sometimes even before these have made their appearance ; and that when purple spots appear, the disease is speedily fatal. Quotations might be made from other authors to prove the same fact, but that which I have already introduced is supported by such illustrious names, and so completely answers the objections which have been made against considering the cases which occurred in Pine-street as small-pox, that it would be unnecessary.

In addition to the remarks which have been made in relation to the symptoms which characterized these diseases, it may now be added, that neither of the patients had been in any manner protected against an attack of small-pox—that in the house where they lodged, a girl of about seven years of age had a short time previous been ill with a disease which some physicians named small-pox, and others chicken-pox—that one of the individuals who perished had recently arrived from an adjoining town where small-pox was then prevailing—that an unprotected person from the county of Saratoga, who lodged in this house during this time, was upon his return home taken ill with small-pox, which terminated fatally in the course of a few days—and lastly, that a person who was frequently in Ferguson's house during the illness of Cutter and the others, communicated small-pox to a family in Washington-street, which, in one of the members, an infant, terminated fatally.

I have been thus minute in noticing the symptoms and other circumstances attending these cases, because they have been, as I have previously remarked, the subject of much dispute amongst the medical gentlemen of our city. The facts I believe have been correctly stated; and if so, there cannot remain a doubt that the disease was small-pox.

From the middle to the end of the month of February, there occurred in different parts of the city six cases of small-pox, modified by previous vaccination or inoculation. Five of these could be distinctly traced to one or other of the cases already detailed. They were nearly uniform in their character, and were all similar to those described by authors. The following case is a fair specimen of the whole.

F. Browning, aged 21, residing in Beaver-street, was attacked on the 22d of February with pains in his back and limbs, nausea, and vomiting, accompanied with high fever and delirium. On the third day, an eruption resembling flea-bites broke out first on the face, and afterward on the body and extremities. The head-ache and delirium still continued—eyes suffused—tongue furred—skin hot and dry—pulse frequent—stools black.

25th. (Second day of the eruption.)—The symptoms are but little relieved. The eruption is in some places becoming pustular, in others vesicular.

27th. (Fourth day of the eruption.)—The eruption continues about the same—the bases of the pustules, however, are somewhat inflamed. The patient still complains of pain in his head, and he is occasionally delirious.

29th. (Sixth of the eruption.)—Fever much abated. The pustules on the back and extremities begin to be covered with a horny scab; those on the head and face are very painful. Tongue, which has heretofore been very foul, becoming clean.

March 1st. Symptoms much relieved. Eruption on the face drying up.

I have already remarked, that five out of the six cases of modified small-pox which appeared during the latter part of this month, could be traced to the contagion of small-pox. In the other, it was produced, as I am led to believe, by the contagion of chicken-pox. But I will not hazard this assertion without stating the facts upon which it is founded.

On the 12th of February, a child of Mr. E. Russel, residing in Pearl-street, in the central part of the city, began to complain of head-ache and pains in her limbs. She had some fever. On the third day, an eruption appeared on her face, and it gradually extended to the back and lower extremities. It was distinct and vesicular, but was attended with some inflammation. It completely disappeared about the eleventh day. This child had not been at all protected, and the appearance of the eruption, and the nature of the attending symptoms, were such as would at any other time have marked it as a case of chicken-pox.

In the same house, a sister of the above, seven years of age, was attacked in a similar manner, a day or two afterwards. The eruption was accompanied with a violent fever, and the symptoms were in every respect more aggravated than in the former case. The eruption on the face disappeared about the eighth or ninth day, but on the lower extremities it advanced slowly to maturation, coalesced, and formed large sores, upon which crusts were formed about the twelfth or thirteenth day, leaving in some instances large and deep pits. This child, as I have already remarked, had been previously vaccinated, and had not, to the knowledge of her parents, been exposed to the contagion of genuine small-pox.

The three following cases differ greatly in their character.

——— Wilkinson, aged 21 years, residing in south Pearl-street, opposite to the house where two persons were ill with modified small-pox, was seized with pains in his head, back, and limbs, and nausea, on the 28th of February. Pulse frequent—tongue furred.

On the 1st of March, a very numerous eruption appeared, which in every respect resembled that of genuine small-pox. The pulse remains about as on the first day of attack—skin hot and dry—eyes red—face somewhat swollen and painful.

2d.—The eruption becomes pustular and indistinct. The patient is delirious at intervals, and complains of great soreness of the throat.

This case continued with little alteration in the fever or other symptoms until the 8th of March; (eighth day of the eruption) when the pustules were filled with an opaque matter, and were somewhat indented. They were indistinct on the face and upper extremities, where suppuration was now commencing, which occasioned the fœtor so characteristic of this disease. The face was much swollen—pulse weak and frequent.

On the 9th, typhoid symptoms appeared, which soon wasted the patient's strength. He died on the 11th of March.

This individual had been vaccinated when an infant. He had a cicatrix on his arm, but it was somewhat large and irregular.

Mrs. McDole, aged 25, residing in the house with Wilkinson, was seized with the usual symptoms of small-pox on the 16th of March, eight days after the death of the latter. On the 19th, a few small pimples with inflamed bases appeared on her face and body; attended with soreness of the throat, head-ache, and fever.

On the 20th, the pustules on her face were perfectly formed, and some of them contained pus—those on the extremities were yet small, hard, and red.

On the 22d, the pustules began to dry up. Some of them were indented in the centre. A slight head-ache continued for a day or two, after which the patient was entirely restored to her former health.

This female had been inoculated with small-pox matter when about two years of age. Several pits were to be observed upon her face and limbs.

An infant child of Mrs. Geer, in Pearl-street, nearly opposite the former, became restless and feverish on the 19th of March. On the 22d, a few vesicles appeared on her body and face, which the next day were filled with a transparent fluid. Her eyes were somewhat inflamed, and intolerant of light. On the 24th, the greater part of the eruption was drying up. A few new pimples, however, afterwards appeared on the arm.

This child had been vaccinated. The case was said to be one of chicken-pox.

During the last week in March, three cases of genuine small-pox appeared in this vicinity, in two of which it was of the confluent kind, and terminated fatally.

While these diseases were thus extending in the southern part of the city, they were also raging in the opposite direction.

At Morison's, in North Market-street, a boy, nine years of age, was seized with the usual symptoms of small-pox about the 6th of March. On the third day, an eruption of small pimples broke out upon the face, body, and extremities, accompanied with high fever and delirium. In the course of three or four days, the eruption became pustular, and these alarming symptoms abated. On the 8th, the pustules were large, and were filled with pus. They now began to suppurate, and the consequence was, that they became coherent in many places, and formed large irregular crusts.

On the seventeenth day of the eruption, when I first saw him, he was labouring under secondary fever. Large brownish crusts were yet to be seen on many parts of his body and face. On the extremities most of them had fallen off, leaving superficial pits. Some redness was still to be observed about the bases of the scabs.

This boy was not in any way protected. He had probably been exposed to the contagion in Lumber-street.

Three children in the same house, between the ages of five and eight years, sickened about the 25th of March with the ordinary symptoms of small-pox. In the two youngest, the disease passed through its course nearly similar to the former. But in the eldest, the eruption was of the confluent kind, and all the symptoms were much more aggravated. The two former recovered, but the latter perished about the fourteenth or fifteenth day. Owing to the prejudices of the parents, neither of these children were protected.

The son of John Miller, aged nine years, residing in Fox-street, was taken with dizziness and vomiting on the 25th of March. Next day, these symptoms were accompanied with pains in the back and limbs, high fever and delirium. On the morning of the 28th, a few red pimples made their appearance on the face, back, and extremities.

30th. The eruption becoming pustular; pustules with slightly inflamed bases—distinct—skin hot—pulse 85.

This child passed through the disease in the usual way. On the ninth day of the eruption, the pustules were beginning to be covered with brownish crusts. When these fell off, which happened about the thirteenth day of the eruption, there was found beneath them a small indentation in the skin. This patient had secondary fever.

This boy was not protected. He had been at school, at the time when a child was ill with modified small-pox in the same house.

Another child in this family, aged nine years, who had been vaccinated nine days before, and who had a well characterized pock, sickened about two days after the above, with pains in the back, limbs, &c. On the second day, about sixty or seventy pimples broke out on the face and body, some of which arrived at maturity during the next day. They all disappeared on the third or fourth day.

Another child, younger than the above, also recently vaccinated, was similarly affected about the same time. The eruption, however, was less numerous, and it disappeared totally on the third day.

Mrs. Miller herself, who had been vaccinated many years since, and who had a well characterized cicatrix on her arm, became quite ill with sickness at the stomach, and pains in her limbs. One or two vesicles appeared on her arm on the third day. They, however, disappeared on the sixth, and left her in her usual good health.

On the 26th and 27th, two children of Sybrant Kittle, residing in the same street, were similarly affected. They had both been at the school above mentioned. One of these had not been protected, and he passed through the small-pox in a very mild form. The eruption was distinctly pustular in both, and the pustules were indented about the eighth day. One of these children had been vaccinated, and upon him the eruption was less numerous, arrived at maturity much sooner, and about the sixth day began to dry up. The fever, and other attending symptoms, were also much less violent.

Several other cases of small-pox and modified small-pox occurred in this vicinity during the month of April; but they were generally such as have been already detailed, and none of them were characterized by any striking peculiarities. With the exception of two fatal cases of small-pox, all those who were taken down recovered after a few days' illness.

About the beginning of May, the Board of Health, alarmed by the extension of this loathsome disease, established a Lazaretto a mile south of the city. To this place all the cases which subsequently occurred amongst the poor, were immediately conveyed. By this means the progress of the disease in the city was greatly arrested, although it still occasionally appeared during the summer and autumn.

From a review of the whole, it seems that the small-pox appeared nearly at the same time in the northern and the southern part of the city; and that nearly all the cases which occurred, whether of small-pox, modified small-pox, or chicken-pox, could be traced to one or other of these. New centres of contagion were afterwards formed in Fox and State streets. In each of these neighbourhoods there were cases of what were called genuine small-pox, and modified small-pox, and in four or five instances, chicken-pox. Each one of these cases could be distinctly traced to the contagion of small-pox. Thus in South Pearl-street, one person died of a very malignant small-pox; several others in the same vicinity were taken down with modified small-pox; and, lastly, a child sickened, and had a slight vesicular eruption, which was named chicken-pox.

These facts prove to us almost conclusively the identity of these diseases, for they were all produced by one and the same cause, viz. the contagion of small-pox. The same thing also occurred in Fox-street, where every possible variety of variolous and varicellous disease was observed to have originated from the same contagion. In this instance it was introduced by a child, who had a mild attack of modified small-pox. The cases which occurred in State-street, are perhaps more conclusive on this subject than any others, and I have purposely omitted to mention them until the present time.

During the prevalence of small-pox in other parts of the city, Mr. Wilkes, vaccinated, residing in State-street, near the capitol, passed through a disease which was pronounced by the physicians to be chicken-pox. The fever was very slight, and the eruption distinctly vesicular, and disappeared in four or five days.

In the same house were three children, all unprotected; and here was now offered an excellent opportunity for testing the identity of small-pox and chicken-pox. The attending physician, either supposing that no benefit would arise from vaccination at this time, and wishing, perhaps, to test the correctness of the theory, left them unprotected. They continued for nearly two weeks in perfect health, and the opposers of the doctrine began to think that they were about to gain a splendid triumph. About the fifteenth day, however, they all sickened, with pains in the back, head, and limbs. A papular eruption appeared on each about the fourth day, which in every case became pustular; and the disease, although varying in its severity, was in each well characterized small-pox. In each the eruption became pustular; in each it proceeded to suppuration, and in each there was secondary fever. I would ask, how are these facts to be explained, unless we grant the identity of these diseases? They are positive proofs in its favour, and are of more force than all the negative ones which can be advanced in opposition to it.

The difference in the violence of small-pox and chicken-pox can scarcely be urged as an objection to their identity. Several cases occurred which left the physicians in great doubt as to what name should be applied to them. Some had all the mildness of chicken-pox; a slight eruption only appeared; but this became pustular. Others again had all the symptoms of small-pox, but the eruption was vesicular. Amidst all this confusion, I have repeatedly asked the question: if these diseases are distinct, where is the line of separation?—where does chicken-pox terminate, and where does small-pox commence? I have as yet been unable to obtain a correct answer, nor do I expect one. Every variety of disease has fallen under my observation, from the mildest chicken-pox to the most aggravated small-pox, and these varieties passed into each other, almost imperceptibly, constituting a perfect series from the former to the latter. It is not my business to answer all the objections which have been urged against the identity of these diseases. So much has been written upon the subject of small-pox and chicken-pox, that it would require more time and talent than I possess. I have confined myself strictly to a notice of those facts which have passed under my own eye. When the disease first appeared, I commenced its examination unprejudiced. I had no theory to support—no doctrine to advocate. I determined to go to the bed-side—to watch carefully those cases to which I had access, and upon them to found my opinions in relation to the great questions which were agitating the medical world. I have done so; and without travelling to Europe, or to other parts of our own country, I have here seen the contagion of chicken-pox giving rise to small-pox and modified small-pox; and I have seen the contagion of small-pox producing modified small-pox and chicken-pox. And if any reliance is to be placed upon the inductive mode of reasoning, the conclusion is irresistible—that at least here, if not elsewhere, these diseases were identical.

But a question of more importance to the community is—how far vaccination is to be depended upon as a preventive against small-pox? And upon this question the recent epidemic in our city afforded me the means of making numerous observations. It may be well to remark, in the outset, that it is now universally admitted that vaccination does not afford a perfect immunity against a subsequent attack of small-pox. The only point to be settled is—what is the amount of its modifying or controlling power? I know it has been asserted, that in those cases in which small-pox occurred after vaccination, it has been owing to the improper manner in which that operation has been performed. Yet the reports of the London vaccine board, and indeed all the recently written works upon small-pox, to some of which I shall hereafter refer, furnish abundant evidence that even the most genuine vaccine disease does not afford a perfect protection against a subsequent attack of small-pox. It is unfortunate that it should be so, and particularly when vaccination had passed the ordeal of the severest scrutiny, for several years, without the least diminution of reputation. It is true indeed that even the celebrated Jenner himself has noticed some cases where small-pox occurred in individuals who had previously passed through the vaccine disease. But these were extremely rare, and were looked upon as very rare exceptions to a very general rule. Recently, however, the number of these cases has increased, and the confidence of many physicians in vaccination has been destroyed. It is now found, that in England, one out of every four vaccinated persons, will, when exposed to the contagion of small-pox, contract that disease. The proportion, although at present less in this country, appears by recent reports to be rapidly increasing.

However unpleasant these facts may be, truth warrants, and the public good demands their publication; for it is important that each individual should know how far he is protected against an attack of this loathsome disease.

When these facts in relation to vaccination were brought to light, many physicians were about to abandon it at once. The old prejudices in favour of inoculation were yet prevalent, and its advocates were ready to catch at any thing which should support its claims to superiority. But it was soon observed that many inoculated persons suffered a subsequent attack of small-pox, and it was even found that in some places where the disease prevailed, the proportion of such was greater than of those who were vaccinated.

It follows therefore that art does not furnish a complete protection against the attack of small-pox. And surely, if this be the case, no one in his senses will resort to inoculation, when it not only endangers the life of the individual upon whom it is performed, but renders him the centre of a contagion which may sweep off hundreds of his neighbours. No physician who regards his own reputation, or the public weal, could have the audacity to try an experiment so fraught with danger; and which would not place the individual upon whom it had been tried, a single remove in point of security above one who had passed through the mild process of vaccination.

It then becomes us to inquire what are the advantages of vaccination? And why should it still be resorted to? The discussion of the question will fully explain the amount of protecting power.

I have heretofore confined my remarks to, and have drawn my conclusions from the disease as it prevailed in this city. But the questions above stated are of a general nature, and for their complete elucidation, we must take a wider range, and present the facts which have been noticed where small-pox has prevailed to a more alarming extent.

I have already remarked, that when the modified small-pox first appeared, it was thought that the value of vaccination would be entirely destroyed, and this subject claimed the early attention of those authors who treated of the disease. A reference to some of these is therefore necessary to the accomplishment of the object which I have in view.

Dr. Alexander Monro of Edinburgh, in his work* on the different kinds of small-pox, and especially those which follow vaccination, published in 1818, after observing that it is his intention to give an account of that mitigated form of the disease, which follows vaccination, remarks, "I have been emboldened to give them" (the pages of his book) "to the public, under a conviction that the facts which they contain may prove useful, by tending to point out the greater safety of vaccination than that of small-pox inoculation; and by rousing those parents who have neglected to get their children vaccinated, to have recourse without delay, to that expedient, as the only certain means of insuring them against all the dangers attendant on small-pox." p. 2.

Again he observes.—"But though it cannot be denied that vaccination has failed to give perfect security against the small-pox, yet in cases where it has failed to do so, it has modified and mitigated that loathsome and dangerous disorder in a most remarkable manner, so that the small-pox, after cow-pox, can scarcely be said to form one of the class of mortal diseases." p. 25.

The value of these remarks will be duly appreciated when we take into account the high reputation of the author, and the great opportunity which the prevalence of small-pox, and its varieties in Edinburgh, afforded him for obtaining correct information upon this subject.

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* Observations on the different kinds of small-pox, and especially on that which sometimes follows vaccination. Illustrated by a number of cases. By Alexander Monro, M. D. F. R. S. E. Professor of Anatomy and Surgery in the University of Edinburgh. Edinburgh, 1818.

The report of the London Vaccine Board, made during the same year, (1818) fully corroborates the principles laid down by Dr. Monro; which states, "That vaccination still rests upon the basis on which it was placed by the reports of the several colleges of physicians and surgeons of the united kingdom, which were laid before Parliament in the year 1807. That the general advantages of vaccination are not discredited by the instances of failure which have recently occurred; the proportion of failures still remained less in number than the deaths which take place from inoculated small-pox. They are lead by their information to believe, that since the practice has been fully established, no death has in any instance occurred from small-pox after vaccination: That in most of the cases in which vaccination has failed, the small-pox has been *a disease remarkably mild*, and of unusually short duration."

Mr. Hennen in his account of the eruptive diseases which occurred in the military hospitals of Edinburgh, after noticing numerous cases of small-pox, and modified small-pox, observes, "The whole series of cases which I have given, present the most triumphant evidence in favour of vaccination, and place in a most conspicuous point of view, the infinite advantages to be derived from the process, when judiciously conducted."*

Again.—"So perfectly convinced am I of the preventing and modifying powers of the vaccine inoculation, that I should never hesitate about employing it, even though it were probable that my patient had imbibed the small-pox infection;

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* An account of the eruptive diseases which have lately appeared in the Military Hospitals of Edinburgh, both naturally and after inoculation, as they have affected children and adults, some of whom had previously had small-pox, some who had been previously subjected to the cow-pox, and others who never had either of these diseases. Communicated in a letter to Dr. Duncan, jr. By John Hennen, Esq. Deputy-Inspector of Military Hospitals for North Britain. Edinburgh Medical and Surgical Journal, Vol. XIV. p. 409.

nor should I be deterred from the practice, by the idle suppositions of the nurse that I was too late, or the learned objections of the doctor that two diseases could not co-exist; experience very clearly demonstrating, that there is still something in the mutual relation of these diseases to each other, that has not been yet satisfactorily explained." p. 456.

Dr. Thompson in his work on the varioloid epidemic which prevailed in Edinburgh and other parts of Scotland, remarks, "I have the pleasure to know, that in every instance in which, during the present epidemic, there has been even a single mark of vaccination having taken place, that the modifying power of cow-pock has been most satisfactorily demonstrated." p. 318. *Philadelphia edition.*

The facts which were brought to light in relation to this subject during the prevalence of small-pox in Norwich, England, perhaps more conclusively settle the efficacy of vaccination, and are therefore deserving of notice.

The small-pox had destroyed two hundred and fifty lives, before the attention of the citizens was directed to the means of its prevention. The deaths from this disease in one week had amounted to forty-three, and vaccination was beginning to languish; the failures after it being the gossiping and chitchat of the day. A public meeting was therefore convened by the mayor, to consider the best means to stop the progress of the epidemic, and to promote the practice of vaccination amongst the poor. The result of this meeting was the forming of a committee, which in a few days obtained a census of the whole city, and the number still liable to the small-pox was found to exceed *seventeen hundred!* "The next step was to provide for the means of vaccinating those who required it. For this purpose all the medical men were summoned to meet together, and all of them with only one or two (perhaps unavoidable) exceptions, did attend; and, forgetting slight differences of opinion as to the exact degree of protection afforded by the cow-pox, all united in one conviction, *that vaccination was the best, the only reasonable means* *to be adopted for checking the dreadful progress of the small-pox.*"*

Dr. Cross, after noticing a few cases of regular small-pox which occurred after vaccination, holds this language: "Had I blazoned them forth to the public, and at the same time withheld the evidence in favour of vaccination, which will be found in different parts of this work, I should have committed an injury for which I could make no adequate atonement; but I am not ashamed of the feelings which prompt me to relate them, nor apprehensive of the effects they may produce, being convinced that they can have no weight against the practice of vaccination, when compared with ten thousand vaccinated individuals living in the midst of a contaminated atmosphere, with five hundred and thirty deaths amongst little more than three thousand who had neglected to be vaccinated—and with the occasional occurrence of regular small-pox in those who formerly had the disease either naturally or by inoculation." p. 65.

If any doubts still remain of the value of vaccination, they will in my opinion be entirely removed by the following statement.

The author of the work just quoted addressed circular letters, containing queries in relation to the prevailing epidemic, to all the medical men residing in the vicinity of Norwich. The result was, that above two-thirds of all the medical men within a district comprising not less than three hundred and fifty thousand inhabitants, communicated to him their opinions. After the end of the year 1819, he continued his researches in every quarter where he heard of reported failures, up to May 1820; "and it is scarcely assuming too much to state," says he, "that it is probable this contains nearly every fatal case of small-pox which occurred during the epidemic in the country around Norwich in persons believed to have been vaccinated. The number is reduced to *one* who was attended during the fatal disease by the surgeon who vaccinated him; *another* vaccinated by an unknown medical man; and *three* by old women; and compared with the numbers vaccinated, and the great proportion of these which must, within the last year and half, have been exposed to the small-pox, we may regard it as a triumphant proof of the fatal effects of the latter disease being generally prevented by the cow-pox." p. 277.

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* A history of the variolous epidemic which occurred in Norwich in the year 1819, and destroyed 530 individuals; with an estimate of the protection afforded by vaccination, and a review of past and present opinions upon chicken-pox, and modified small-pox. By John Cross, member of the Royal College of Surgeons in London, &c. London, 1820, p. 26.

Such is the mass of testimony in proof of the modifying or controlling power of vaccination, drawn from the observations of medical men in England. In our own country, the prevalence of small-pox has afforded great opportunities for testing the correctness of the opinions advanced abroad. So far as my researches extend, it is here generally agreed amongst medical men, that vaccination, if properly performed, has the effect of modifying an attack of small-pox, so as to render it a comparatively mild disease; and that in this respect it possesses advantages over inoculation, or even a previous attack of small-pox. In this city, not a single case has to my knowledge occurred which in the least degree detracts from the superior value of vaccination; on the contrary, the most incontrovertible proofs have every where appeared in its favour.

ART. III. REMARKS *on* MENSTRUATION: *being an attempt to show that the generally received doctrines on this subject are not only untrue, but inadequate to explain some of the most interesting phenomena connected with that process.* By JAMES R. MANLEY, M. D. President of the Medical Society of the State of New-York.

EVERY intelligent physician, whose attention is arrested by the publication of any particular point of medical doctrine, or the avowal of any interesting or consequential medical fact, and who is at pains closely to examine the one or severely scrutinize the other, must have been frequently surprised to find both so feebly supported, as to justify him in withholding his assent from either. The assumed facts are oftentimes false, or detailed in such a manner as to have a deceptive character; while the reasonings from them, though they are matters of obvious inference, are not half so well calculated to elicit truth, as to involve their supporters in a labyrinth of difficulties, from which the utmost ingenuity cannot extricate them. Medical testimony, from its very nature, is liable to be defective; the results of observations which come to us in this form, are either seen in such a limited field of view, or so discoloured by prejudice or preconception: they depend upon such a multitude of minor, previous incidents, each operating with different degrees of strength, but all calculated to modify ultimate conclusion, that nothing but the most scrupulous exactitude will enable the inquirer to adjust their varied influences, or balance their conflicting evidence. It is in vain, therefore, that we regret the fallacy of medical fact, or make it the subject of querulous discussion; it belongs to its nature to be indefinite or obscure, unless in some rare instances where the premises being settled, the results are constant: in all others, both the interests of the science and our own reputation direct to a rigid examination of the facts, before we admit the inferences, upon which pride, prejudice, partiality, or even an honourable emulation in authors, would erect any new doctrines. It is to the superficial analysis of what are considered matters of fact, on the one hand, and to the mistaken confidence accorded to great names, on the other, that we must attribute that unceasing succession of medical theories which have amused or interested the medical public, each in its turn, as long as the charm of their novelty continued, or until the bases on which they rested were fully explored; in either of which events, they have sunk into that oblivion, which, if judged by their merits, all but their authors would have readily anticipated. These remarks, though not necessarily connected with this paper, have nevertheless so naturally suggested themselves, that I have offered them as introductory. Whether they are appropriate or not, the reader will be the judge. They are certainly not more immediately applicable to it than to many other theories which might be made the subjects of criticism; but they will be found to receive ample confirmation in the sequel.

No one branch of obstetric science has received a larger share of the attention of medical philosophers, and certainly none has more puzzled the wits of anatomists and physiologists, than *menstruation;* and it will be one of my objects to show, that none has so little compensated the labour of all the varied and multiplied attempts which have been made, in order to its explanation. It would indeed seem, that deference to authority in some, and the indolence or indifference of others, had conspired to render the subject more obscure and unintelligible to us than it was to our ancestors two centuries ago, who, following the dictates of a plain common sense, thought it no sin to believe what they could not fully comprehend. If they were wrong in this instance, their faith did neither vitiate their practice, nor mislead the judgments of others; and that they were not far from being right, will appear probable as we proceed. In order to observe some method in prosecuting the inquiry, we will state first the opinions of some of the older writers; and we shall not travel far back, for two reasons—that we may avoid the ostentatious parade of old reading, of which we do not wish to be accused; and because we think that the world must have grown older to little purpose, if there still exists a necessity for recurring to ancient authorities for the explanation of phenomena which are of every day's occurrence, and which must be familiar to every observant practitioner. 2dly. The opinions now generally received and taught, and the data on which they rest. 3dly. Our objections to those opinions, deduced from observation and the information we have been enabled to collect. And lastly, Our own belief. If we indulge in speculation, the reader shall be fairly apprised of it; and that we may bring our paper within a reasonable limit, we shall be brief wherever the necessity of the case does not require us to enter into detail.

The first head we shall dismiss with very few remarks, as it is not our intention to enter into a laboured analysis of the many speculations which have been offered to account for the periodical recurrence of the catamenia, nor even attempt to settle the differences which exist respecting the description of vessels from which they are derived. The nature of the matter of menstruation shall be the chief subject of our attention; as upon the disputed character of this point depend the fashionable doctrines which it is our business to controvert, viz. *that it does not coagulate unless it is depraved; that it is essentially different from blood; and, of course, that it is the product of a peculiar secretory process.*

The first writer whom I shall name is *Ambrose Paré*, whose celebrity as an accoucheur was without a parallel at the time in which he lived, and to whom in a great degree is the credit due of reducing midwifery to something like an intelligible science. He calls this discharge *blood*, and says that it is derived from veins. In the 49th chapter of his book *On the Generation of Man*, translated by his pupil, Thomas Johnson, he remarks:—"Usually they call the flux of bloud that issueth from the secret parts of women, monethly flowers or courses, because it happeneth to them every moneth so long as they are in health. There be some which call them terms, because they return at their usual time. Some call them purgations, because by this flux all a woman's body is purged of superfluous humours." And again, in chap. 50. "Because a woman's body is more cold, and therefore hath the digestive faculty more weak, it cometh to pass that she requireth and desireth more meat or food than she can digest or concoct. And because that superfluous humour that remaineth is not digested by exercise, nor by the efficacy of strong and lively heat, therefore by the providence or benefit of nature, it floweth out by the veins of the womb, by the power of the expulsive faculty, at its own certain and prefixed period of time. But then especially it beginneth to flow, and a certain rude portion of bloud to be expelled, being hurtful or malign otherwise in no quality, when nature hath laid her principal foundations of the increase of the body, so that in greatness of the body she hath come as it were in a manner to the highest top, that is to say, from the thirteenth to the fiftieth year of her age. Moreover, the child cannot be formed in the womb, nor have his nutriment or increase without this flux."

Mauriceau, who lived nearly one hundred years after him, when the anatomy of the human body was more studied, and better understood, (we quote from Chamberlain's edition of his work, who may be presumed to have been of the same opinion, as he gives the passage without comment,) says, "The veins and arteries of the womb proceed partly from the spermatic vessels, and partly from the hypogastric: all these vessels are inserted and terminated in the proper membrane of the womb; the arteries convey to it blood for its nourishment, which being brought thither in too great abundance, sweats through the substance of it, and distils in manner of a dew into the vacuity of its bottom, whence proceeds the *terms* in a woman not with child, and the blood which nourisheth the fœtus when bigbellied. I say the arteries convey the blood, forasmuch as the circular motion, which is made continually in all living animals, shows us that they alone are capable of doing it, and not the veins, which serve only to re-conduct to the heart the blood which is not evacuated, after the manner aforesaid of the womb, nor consumed either in its nourishment, or the nourishment of the fœtus when the woman is big." And in his chapter on the *menstrual flux*, he considers a flooding to differ from it chiefly in degree: "When a woman voids blood downwards, (says he,) it must be carefully considered whence it proceeds, and in *what manner;* whether it is the ordinary courses, or a real flooding." The menstrual discharges which occasionally obtain, (pregnancy notwithstanding,) in healthy subjects, so far from being detrimental to the mother or child, he affirms are salutary, and when they are inordinate in quantity, they are relieved or cured by vicarious evacuations, a practice which is successfully followed at this day.

Dionis, a distinguished French surgeon and anatomist, who lived about the same time, in describing the womb, says, "It is very thick at the time of the menstrual flux; for its whole substance being upon that occasion overrun with blood, is thereupon swelled and puffed up; but it falls upon the evacuation;" and again, when on the subject of its blood-vessels, "There had been no occasion for such a quantity of arteries, if they had only furnished the womb with blood for its nourishment. But they likewise import what is necessary for conveying the chyle to the fœtus, and pour in blood through an infinity of small branches upon the whole body of the placenta, in order to be sent through the navel string to the fœtus."—"When a woman is not with child, the same blood slips away through several small passages that open into the circumference of the bottom of the womb, and falls into its cavity, from whence it makes its exit through the vagina every month; and this is what we call the menstrual blood. These little passages are plainly visible in those who are dissected soon after child-birth, or in the time of the menstrual flux."

La Motte in his treatise on the menstrual flux, calls it a monthly evacuation of blood, and charges the derangement of this function as one of the causes of sterility.

Paul Barbette, an old Swiss writer, who has left us practical remarks upon a great many subjects of physic and surgery, denominates it a discharge from sanguineous and lymphatic vessels.

Hoffman offers his opinion on this subject very explicitly in the following extract from his tract on menstruation: "Excretio sanguinis ab utero, singulis mensibus, ob nimiam sanguinis in fœminis abundantiam et ob peculiarem fabricam, sanatatis et alendi fœtus causa fit.—Causa menstrui fluxus est nulla alia quam nimia sanguinis redundantia, optimo consilio ad sanitatem tuendam evacuatur;" and he has this remarkable scolium: "Variæ prostant de hujus fluxus causis in scholis medicorum opiniones. Alii ad lunæ motum et mutationem, alii ad fermentum uteri peculiare, nonnulli ad *Helmontii* archæum seu corporis nostri rectorem quidam ad arcanam et sapientiam naturæ legem, eam referunt. *Nos reconditis et a communi sensu longissime remotis ejusmodi principiis penitus neglectis, ex re maxime obvia et simplici, sanguinis nempe plenitudine majori quam necessaria est, hujus fluxus originem ac causam repetimus.*"

Boerhaave, in aphorism 1290, thus expresses himself: "About the time that the body of a female is arrived at its full growth, it uses to make a greater quantity of blood in a good constitution than what the vessels will contain, which is the reason why part of it is let out at the ends of the arteries of the womb, which evacuation is called monthly courses, or the menstrua. From the blood thus penned up, we shall often see most surprising veins opened for a passage, marked down by the observators of the menstrua; for the same has been seen by physicians to force its way through at the eyes, ears, nostrils, gums, salivary glands, those of the gullet, intestines, bladder, heart, the skin, through particular wounds or ulcers: aphorism 1292. And in aphorism 1300, speaking of the diseases of pregnant women, he says, "Whereof some do proceed from the menstruous blood being hindered to separate, because of the closeness of the womb, and the fœtus not being yet able to consume the quantity conveyed thither for its nourishment."

That *Smellie* is of the same opinion, will sufficiently appear from the following passage: "The *catamenia* are no more than a periodical discharge of that surplus blood which is collected through the month, and toward the crisis, attended with pains in the loins, breast, and head more or less acute, according to the circumstances of the *plethora;* all which complaints gradually vanish when the *menses* begin to appear.

Haller, though he uses the term secretion when speaking of the menses, calls it a spontaneous hemorrhage, and acknowledges the difficulty of ascertaining whether it flows from veins or arteries.

Cullen believed them to depend upon a topical congestion of the blood-vessels; calls the materials, *blood;* speaks of the menstrual nisus as an hemorrhagic effort; and in no part of the theory which he invented to account for it, does the term secretion occur.

Baudeloque calls the discharge blood, and says, "if it does not always appear as pure as that drawn from the arm, it is because it is mixed with the humours of the vagina, or it is corrupted by its continuance in that canal." Of the pains attending it he remarks, "they depend upon the blood in the sinuses of the uterus, and the difficulty with which it escapes:" and further, "that the sterility of women who are entirely deprived of the menses, the suppression of that evacuation during pregnancy, and the process of lactation, sufficiently declare that it is not a *depuration*, but merely a *depletion*, and that that blood has a much more *precious destination*." We could go on from the notes before us to name many other authors who have recorded their opinions on this subject, from what they saw, and not from what they suspected or conjectured; but the catalogue would be too long, and the iteration very tedious. Almost every medical writer before the time of Hunter, and a large proportion of those who have written since, have taught this obvious doctrine; and although there are some who hesitate to embark in the discussion of a truth of which they are thoroughly convinced, from fear of finding themselves without their consent engaged in controversy, and who therefore state the opinions of others without risking their own; still it is, beyond a peradventure, certain that the balance of evidence, as it at this day stands recorded, is decidedly in favour of the old doctrines. With the reasonings of the above writers, we have at present nothing to do; they are of various value; some are worth more and some less, and perhaps all defective: but the declaration of the fact, that the discharge of which we speak is blood, derived as it obviously is, from the evidence of their senses, and requiring no extraordinary anatomical or physiological acumen to attain, is strong presumption that it is correct. How far these opinions can derive confirmation from arguments adduced by those who have undertaken to controvert them, we shall presently endeavour to ascertain.

2. *The doctrines now generally taught.* It is not necessary to prove what is matter of common observation; every man at all conversant with medical reading, must have observed, that with few exceptions, all the late editors of obstetric works, whether authors or compilers, have attempted to render current the opinion, that menstruation is a secretion: that the material evacuated is essentially different from blood, and that sterility in married females, so far as the female is concerned, is in a great degree attributable to the derangement of this secretory process. The data on which this view of the catamenia rests, might be conveniently divided into two classes, as they have respect to the anatomical structure of the uterus itself, and as they are derived from the evidence of the material of which the menstrual discharge consists. The first set of reasons all depend upon the assumed fact, that the uterus is a gland; and the second is presumed to be amply supported by the sensible qualities of the matter evacuated. We will however briefly state them without reference to this distinction in the order laid down by Dr. Nath. Chapman of Philadelphia, who as a public teacher, has taught and defended these doctrines. It is asserted,

1st, That the uterus in its villous and vascular structure, resembles in some degree a gland, and also in its diseases, being equally subject to schirrhus, cancer, &c. &c.

2d, That like other secretory organs, blood is very copiously diffused through it.

3d, That by the arrangement of its vessels, it is evidently designed that the circulation should be retarded for the purpose of secretion. The arteries are not only exceedingly convoluted, but they are larger, and with thinner coats than their corresponding veins.

4th, That in common with other secretions, menstruation is often at first imperfectly done, and is subject afterwards to vitiation and derangement. At its commencement the discharge is commonly thin, colourless, and deficient, and recurs at protracted and irregular intervals, with pain and difficulty.

5th, That in many of the inferior animals, during the season of venereal incalescence, there is a uterine discharge, which is undoubtedly a secretion. This answers seemingly the same end as menstruation, namely, to give to the uterus *an aptitude to conception.*

6th, That the menstrual discharge differs from blood, in being of a thicker consistence—in possessing a different odour—in having a much darker colour—in not separating into its constituent parts—in never coagulating—in being much less liable to putrescency, and in not affording the same results from analysis. If we have not enumerated all the differences presumed to be distinctive, it is because our information extends no further.

3. *Objections to these doctrines.* These are of too serious a nature to permit them to stand as points of support to any theory, and much less to one which is calculated to have such an important practical influence as that we are now considering. Those derived from uterine structure are not only not proved, but most unequivocally denied by anatomists; and to argue of structure from function, is at best but an ingenious mode of speculating, never admissible except in cases where the minuteness of parts renders demonstration impossible; and even if it were, it would be obviously unfair, where the function itself was the very point in dispute. The analogy attempted to be instituted between the uterus and a gland, on account of its liability to the above-named diseases, cannot be considered as possessed of any peculiar weight, so long at least as it remains doubtful whether the pathology of those diseases is well understood; for while this point remains unsettled, it amounts to no more than an argument resting upon an arbitrary name. That there are diseases of the uterus which prove rebellious to remedies, and are very painful, and that scirrhus and cancer are of that class, we know; but to conclude for this reason alone, (which, by the way, is all that appears,) that these complaints are scirrhous or cancerous, is

certainly to found a dogma on a very narrow basis; and to infer that, therefore, the uterus is glandular, is in fact to declare that no two structures are subject to the same diseases. The argument drawn from the number and arrangement of its vessels, though more specious, is little less objectionable. In the economy of nature the means are not only adequate to the ends, but they are the best that could possibly be devised to answer the purpose for which they are intended. The vessels of the uterus are not only exceedingly numerous, lax, and convoluted, but they are reflected upon themselves in such manner as to admit of the enlargement of that organ without any alteration in the structure of them: and the necessity of this mechanism is evident, from the functions which it is required to perform, and the alterations in its size, which are indispensable to it, considered as the organ which is to receive, cherish, and conveniently lodge the embryo, till the allotted term shall have expired which nature has fixed for the perfection of fœtal existence. Without a mechanism of this kind, it appears impossible that the uterus should increase to the enormous size which we see it occasionally attain, without a total disruption of the vessels distributed throughout its parietes; and that this is reason enough for the arrangement which we see, if not the only one necessary to account for it, derives confirmation from the fact, that the nerves observe the same order in their distribution. It is more than doubtful whether the blood-vessels of the uterus receive or carry, under ordinary circumstances, more blood than is sufficient to keep them permeable; for if it were otherwise, that organ, more than any other, would be liable to inflammation, which we know is not the fact.

Of the argument drawn from the consideration, that in common with other secretions, menstruation is often at first very imperfectly performed, the advocates of the doctrine are at liberty to make what use they please. For ourselves, we confess that we are acquainted with no secreted fluid in the healthy condition of the secreting organ, which is not as perfect in its kind at the first as at any after period. The bile, pancreatic juice, tears, urine, and saliva, for all we know, or can know to the contrary, are as completely elaborated at their first appearance as at any other time of life; and if, as stated, the menstrual discharge was proved to be thin, colourless, and deficient, these facts could have no assignable weight in the argument, unless it could be shown that this deficiency in colour, consistence, and amount, were irreconcilable with the fact that the ordinary material evacuated was blood, and inexplicable, unless through the agency of some secretory process.

That the females of many of the inferior animals, during their season of incalescence, have a discharge from the external organs of generation, is certainly true; and perhaps it is allowable to call it a secretion, though it must be granted on all hands, that such discharge may occur without the intervention of glandular structure, merely from the extraordinary excitement occasioned by the afflux of blood to the parts. But the feebleness of this analogy cannot but be obvious at a single glance. The one arises from a momentary stimulus, which only under special circumstances is equal to the production of this effect; the other is regularly periodical, depending upon causes which elude our utmost scrutiny, and controlled by no circumstances which will not, at the same time, impair the health of the individual, absolutely resolving itself into a law of her being.

The arguments drawn from the qualities of the material of menstruation, as they appear to be specious, and have been most insisted on, we will examine somewhat in detail; though we would have it distinctly understood, that whether successfully answered or not, they can have but little influence on the main question, as we are fully prepared to deny the leading position which they embrace, to wit, that menstrual blood does not coagulate. And were it not that we are interested to show that the doctrine of menstrual secretion is not only not true, but that it is insufficient to explain the phenomena occasionally attending the process, however ingeniously it may be urged, we should not enter seriously upon its refutation. We believe that menstrual blood does coagulate, and that when it does not, the fact is explained with facility, without resorting to the aid of secretion. But as it frequently happens that it continues fluid, in consequence of an over-excited condition of the vessels which furnish the discharge; and as the frequency of this occurrence may have induced the advocates of the modern doctrines to quote the exceptions to the fact, instead of the facts themselves, we feel it to be our duty to attempt the explanation. The opinions against which we are contending, appear to have their origin in the observation of a fact, which, though it had occurred a thousand times before, never arrested any special attention till the time of Mr. Hunter; viz. that in cases of imperforated hymen, the material collected, though it may have been accumulating for months, nay, even years, did not separate into the same parts that blood does when drawn from the arm, or left at rest extravasated; and he thence inferred, that if it was blood, it was essentially different from the circulating mass. In his work on the blood, he says, that "in healthy menstruation it does not coagulate, but in the irregular or unhealthy it does." We will for the present suppose this to be true, or at least waive the objections to which it is liable, till we have disposed of some minor points much more probable, in order to see whether they are not perfectly reconcileable with the fact that this discharge is blood, though they are offered as arguments for the opposite doctrine.

That menstrual blood does occasionally differ from ordinary blood in colour and consistence, may be true, though we think it would be difficult to show that these differences constitute it an entirely different material, unless it could be proved that the changes were necessary and not accidental. Blood drawn from the arm differs frequently, in both these respects, in different persons, and at different times in the same person. The first part drawn, almost invariably has a deeper tint than that received into the cup immediately before finishing the operation. The blood of pregnant females is more thin and florid, all other circumstances being equal, than it is in any other case. The quantity drawn, the time occupied in drawing it, and the manner in which it is done, whether from a large or small orifice, all influence the appearance of it; and it is reasonable to suppose, that as the blood in ordinary cases takes on this varied character, that that evacuated from the uterus, supposing it to be blood at all, would not essentially differ; and this we apprehend would be found to be the fact, were it not that it is subjected to changes in its passage through the uterus and vagina. The alteration of colour is easily accounted for by its congestion and detention in the tortuous vessels of the uterus, which gives it the character of venous blood, and by the absorption of its more fluid parts by the surfaces over which it has to pass; which leaves a larger proportion of the colouring material in that which is evacuated than blood would naturally possess; and when we add to this the loss of its fibrine, of which it is deprived when it is destitute of the power of coagulation, which by the way is always the case when it has the dark colour, every difficulty in the explanation is removed. The odour of the discharge, which among other things has been adduced in proof that it is a secretion, it is presumed would never singly have been offered, inasmuch as this quality cannot be proved to be inherent to the discharge itself, and may be satisfactorily settled by a knowledge of the fact, that it partakes of the nature of the ordinary secretions of the organs of generation, which derive their smell from the numerous odoriferous glands distributed about the external parts. It is said also to be by no means so liable to become putrid as ordinary blood; this may or may not be, for we have had no means of judging; and if it is so, it must be confessed that it is difficult of explanation. We regret that we have not been able to submit the question to the test of experiment; we know from actual observation that it is not true when the discharge coagulates; and when it does not, it is extremely difficult to procure a sufficiency of the material for the purposes of experiment; we shall therefore consider this point as still sub judice. The next point to be considered is, that upon analysis it does not afford the same results as ordinary blood. This is true in so far as it is deprived of the power of coagulation; and if our view of the subject is correct, it would be marvellously strange if it were otherwise in any case where the material remains fluid, for by parting with its fibrine, it loses all that part of it which may be supposed to have the greatest affinity to the simple animal solid; and it could no more be expected that it should yield the same results, than that blood drawn from the arm, and deprived of its coagulating lymph by mechanical means, should offer an analysis similar to that blood which had not been subjected to the same experiment.

We come now to that which has been presumed the distinctive character of the menstrual flux, viz. its want of coagulability. On this point, as we have before remarked, we are completely at issue with those who hold the doctrine of menstrual secretion, who, it will be recollected, also deny the character of menstruation to the discharge whenever it does not coagulate; and perhaps, in order to be consistent with themselves, it is necessary that they should. We have seen how far the arguments urged in favour of secretion, so far as they are founded in fact, may, when properly understood, be made to consist with and support the opposite opinion. We will now attempt to show how insufficient the doctrine is to explain some of the phenomena occasionally attending menstruation; and when we have done this, which we shall do in a word, we shall have answered, incidentally, this last argument.

We believe that the position has been assumed without warrant, as it is directly opposed to our own experience, and at variance with that of all other practitioners whom we have consulted on the subject, and when we add to this the unqualified testimony of patients, nurses, and attendants, all to the same effect, we are constrained to conclude, that the exceptions have been made the data on which the opinion has been founded, and not the rule itself. It would be worse than useless to spend time in proving this, inasmuch as the advocates of the doctrine of secretion deny the application of the term unless the material does coagulate: we will therefore show that the doctrine, if true, is defective, and no ingenuity can supply the deficiency. The fact is at hand to offer in proof, and the reasoning is as short as it is conclusive. In dysmenorrhœa there is occasionally formed a membranous substance very similar to, if not precisely the material which in pregnant females is called *decidua*. Whence is it? Is it the product of secretion, or the coagulating lymph of the blood spontaneously separated from it after it has escaped from the uterine arteries? It is certainly the one or the other; if it be the latter, the mode of its formation fully accounts for the fluid appearance of the discharge, although it is allowed by the advocates for the doctrine themselves, that it is evidence of menstruation deranged or depraved: if the former, it presents the singular anomaly of *two secretions essentially different in all respects going on in the same organ at the same time:* for whenever this membranous or pulpy substance is evacuated, it is accompanied by a fluid resembling blood, which will not coagulate, or in other words, with the material of true menstruation themselves being judges. If it be not the true material of menstruation according to their view of the subject, we have a right to know wherein it differs, as in all its sensible qualities it is known to correspond: and if it is, the evidence is complete, according to their own showing, that this uncoagulating discharge, instead of being a healthy, natural evacuation, is the result of a diseased action of the uterine apparatus, whether glandular or not, as we have shown that it cannot be a secretion.

Our own opinion is, that natural menstruation is an active hemorrhage; that the discharge is blood, and of course that, like all other blood, it will coagulate; and that, when it does not, the process of menstruation is deranged or depraved, and is to be attributed to a paucity of the discharge, or to such a diseased condition of the uterine vessels which afford it, as to allow a rapid separation of the blood into its constituent parts; in which case the coagulating lymph is deposited on the interior surface of the uterus, from which it is occasionally evacuated by the agency of the irritation which itself creates. It is no objection to this opinion, that the menstrual discharge when fluid does not always offer evidence of the presence of this fibrous or pulpy material; as, if it does not exceed in amount the quantity of coagulating lymph which would be separated in one, two, or even three terms, it may reasonably be presumed, to use a phrase of the late Dr. Hunter, that it would occasionally be melted down and pass off with the ordinary discharges unobserved. That this is frequently the case in dysmenorrhœa is beyond a doubt, and practical authors on the diseases of females direct that this fact should be particularly inquired into, in order to the adoption of a proper plan of treatment.*

It was our intention to have examined in this place the opinion of the late Dr. William Hunter respecting the *decidua*, in order to show that its formation is totally inexplicable upon any other view of the material of menstruation than that here offered; and to present the various analogies derived from the known phenomena of hemorrhage which may be brought in aid of the doctrine, in order that the whole might form a basis upon which to found some new views of the subjects of dysmenorrhœa and sterility, in order to the improvement of the treatment of the one and the total removal of the other: but as this paper is already sufficiently extended, we shall reserve them for a future occasion.

ART. IV. *An Account of the* TOPOGRAPHY, WEATHER, *and* DISEASES *of* NASSAU, *Island of New-Providence, Capital of the Bahamas, West Indies.* By P. S. TOWNSEND, M. D. of New-York.

NASSAU is in latitude 25° 25′ north, and situated upon the north side of an island called New-Providence, one of the group of the Bahamas. The town and island contain about five thousand inhabitants, one-third of which are coloured people, and one-sixth of the coloured people, mulattoes. The island like the rest of the Bahamas, consists exclusively of coral rock, black, ragged, and apparently worm-eaten, and water-worn like amygdaloid externally,* and either of pale ash, or whitish yellow colour within, and of so soft a texture as to be easily wrought into blocks for building, and into drip-stones, troughs, and other domestic utensils. This rock, which is the only mineral substance found in this or any other of these islands, and which when growing on the bottom of the sea, spreads out into those arborescent expansions, which formed originally the tenements of generations, of animals that are now extinct, has been by time consolidated into a homogeneous substance, the structure of which is obviously laminated, as may be seen on different parts of the shore. The island being of such small dimensions, there are no rivers, and only here and there a small run, which scarcely deserves the name of creek, some of which serve as outlets to the stagnant swamps, and decomposed vegetable matter from bushes, weeds, and other plants at their source. Besides these there are several healthy ponds of brackish transparent water, of which one or two are some miles in extent, with hard rocky bottoms, covered with sand and shells, and with subterraneous communications to the sea, the tide ebbing and flowing about six inches. In the crevices between the rocks, and in small patches on their surface, there is a thin dry reddish loam, which scanty as it is in quantity, gives sustenance and support to a luxuriant crop of bushes, such as the bay cedar, prickly pear, cocoa plumb, samphire, cock spur, bay lavendar, &c. which grow chiefly near the sea, and the alder, the hercules club, wild thyme which grow in the interior; and to the roots of numerous lofty fruit and ornamental trees, which to judge by their dimensions and abundant and ample foliage, must have obtained their nourishment from the warm and sunny atmosphere in which they breathe, rather than from the foundation upon which they stand. Such are the cocoa-nut tree, the zapodilla, cotton tree, pride of India, avocado pear or vegetable marrow, the mango, sugar apple, star apple, custard apple, orange, lemon, lime, the shadduck, grape fruit, and forbidden fruit, guava, tamarind, bread fruit, sour sop, mammie, and papau, plumb, sand-box, coffee, palmetto, pine, sea grape, Jamaica apple, mastic, pigeon plumb, fig, and wild fig, poison wood, lignumvitæ, brazelletto, satin wood, yellow wood, cedar, horse-flesh and Madeira mahogany trees, &c. &c.

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* Vide Burns's Midwifery, Article *Dysmenorrhœa.*

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* From its rough surface, it is called honey-comb rock, but it has much more the appearance of amygdaloid, though not worn like that into cells. It may perhaps be said to resemble fret-work in sculpture more than any other thing.

The town is located on the shore of a narrow long bay, formed by a narrow rocky reef between it and the sea called Hog island, covered with bushes like the island of New-Providence, and running before and longitudinally with the main street of the town, east and west. About half a quarter of a mile in the rear of the town, the land rises abruptly to fifty or seventy feet elevation, on which is built the government or governor's house, the barracks, and the two forts, Charlotte on the west, and Fincastle on the east. In the rear of this hill the island forms a long shallow basin, covered by a dreary waste of bushes, which grow to the height of from six to twenty feet in the crevices and hollows of the rock, with no object to diversify the scene, but the glistening surface of some solitary pond, or the tall tufted trunk of the majestic cocoa-nut, to denote the existence of small garden spots, which by dint of hard industry, have been reclaimed from the sterile rock. Beyond this again, and about two and a half miles from town, is a high ridge running easterly and westerly, and called the blue hills, of about the same, or perhaps somewhat greater altitude than the ridge first described. From these again the land, or rather rock, descends to the sea on the south side of the island, the general course of the island being east and west.

As there are no rivers, and therefore no alluvion, and as but very little of the debris of vegetation is washed into the sea, the shores are bathed in water so perfectly pure and transparent, that the bottom may be clearly seen at the depth of a *hundred feet*. This has a peculiarly beautiful appearance to one accustomed to the muddy water of alluvial countries; and becomes still more interesting when it is recollected, that without this providential circumstance, and the brilliant sky of the climate by night as well as by day, the navigation of these islands would be infinitely more dangerous and disastrous than it is at present.

There is nothing that can properly be called a marsh, but there are several swamps and wet places, especially around the margin of the ponds, and near the sea-shore, where the luxuriant crop of vegetation during spring and summer, and the decomposition which ensues in the autumnal months, produce as in all other countries, miasmatic fevers. On the north side of the island, and on many of the chain of reefs which run along easterly from New-Providence, I have observed the coral rock has a tendency to shelve over into the sea. The coast also on the north side of the Bahamas is remarkably bold and precipitous. Half a mile opposite the west end of the town you pass the western extremity of Hog island, upon which the light-house stands at the entrance of the harbour, and leaving the white bottom of the harbour, and as it is termed *white* or transparent water, find yourself in a few yards, out of soundings, and in the deep blue water of the sea, as unfathomable as in the middle of the ocean. The line which forms the brow of this stupendous submarine precipice, is distinctly visible by the colour which the water assumes when viewed from the town. In the bay it is of a beautiful pea green, here and there streaked with brown or yellow, but on reaching the declivity, it suddenly changes to a deep or dark blue, which, contrasted with the former, gives a most picturesque and singular appearance to the harbour of Nassau. In richness of tint, the green waters of the Bahamas far exceed in beauty those of the Mediterranean.

On the contrary, the south side of this groupe of islands slopes so gently, that you may almost wade into the sea for miles, and no vessel except the smallest kind of craft can come within a long distance of the shore. In short, the Bahama Islands may be considered one immense formation of coral rock of several hundred miles in extent and breadth, running generally in a north-easterly and south-westerly course, by far the greater part of which is sunk several fathoms below the surface of the sea, and known under the denomination of the Great Bahama Bank, &c.; while part has emerged from the water to the altitude of from fifty to one hundred feet, and is composed of long barren ridges on reefs of rocks covered with bushes, with here and there a cocoa-nut tree, which is the general aspect of the headland of this cluster, when seen at sea.* The process by which these and other similar islands are made, may be compared to what takes place in the vegetable world in the formation of bog, or marsh. Crops of coral and other sea plants follow each other in succession, and are in turn decomposed, or rather disintegrated, and consolidated into laminated rock, the bulk of which, aided by the remains of shells, ultimately increases to such dimensions, as to swell above the surface of the water. At Lyford's Key, upon the south-west point of the island, there was a channel, not sixty years ago, which would admit vessels drawing six feet water, but which is now a cornfield, with a house upon it. In the South Sea Islands, according to Capt. Flinders, the changes which, from the incessant activity of these animals, are wrought in the configuration of submarine masses of coral, render it necessary to have new charts every few years.

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* Sterile and rocky as these islands are, their growth of bushes make them appear a few miles at sea as if clothed with a rich verdure. On nearing the shore however, interstices and bare patches of rock begin to be discovered between the bushes, and on landing, one is astonished that as much vegetation as is actually found upon them can obtain sustenance from the few scattered handfuls of soil sprinkled in the crevices and indentations over the rough surface of the rock.

This coral substance is observed here in three different states:

1st, As it is found growing upon the banks under water inhabited by living animals.

2d, Where the habitation has been deserted by its tenant and is going to decay, retaining more or less of its original characters, though in an imperfect state, such as the colours, form, &c. In this condition I have seen the madreporites, brain stones, &c. &c.: also many species of shells (retaining their colours, though imbedded in the coral as petrifactions,) in great quantities in the stone fences on different parts of the island.

3d, The consolidated laminated coral rock of soft texture already described, and which is the oldest formation.

From all that has been said, it is obvious that there is nothing in the soil, or rather the basis which composes this cluster, that can be deleterious to health. The vegetation also being in the aggregate less abundant, and less luxuriant in proportion to this sterility, cannot operate so extensively in the production of diseases, as in those islands covered with a deep stratum of rich loam. The bibulous nature of the calcareous rock also, to which it clings, serves to absorb and to neutralize perhaps many of the noxious juices and exhalations which result from the decomposition of vegetable matters. The slime and mud however, which collect in these ponds in the rear of the hill back of the town, is said at certain seasons to impregnate the air with unwholesome miasms. It is even asserted that the south-easterly winds, which during summer and autumn are most prevalent, become saturated with these exhalations, and passing in their course over the western part of the town and the barracks, render those places unhealthy, while the central and eastern part of the town, being out of the range of these winds, remain comparatively exempt from sickness. I shall probably have an opportunity of testing the truth of this assertion in autumn. In the mean time I cannot help remarking, that the opinion appears to me quite improbable, with respect to the western part of the town, for the range of hills there is as high and as much a shelter from the ponds in the interior of the island, as to any other part of the town.

2. *Weather.* The meteorological observations embraced in this table, comprise a space of six months, commencing with March 1824.

		March.	April.	May.	June.	July.	August.
Average highest elevation of the thermometer between meridian and 4 P. M.		78.29	80.43	83.22	85.20	89.00	88.06
The winds prevailed.	E. as W.	23	7	2	2	10	12
	N.		2	1	2	5	1
	S.	2	2	6	7	1	7
	N. E.	24	12	20	12	8	5
	S. E.	31	24	24	16	34	35
	N. W.	8	8	5	7	1	
	S. W.	2	3	2	8		2
Days of rain		7	8	13	13	11	20
do. of thunder and lightning,			1	2	2	6	13

The range of the thermometer in any month scarcely ever exceeded from *five* to *eight* degrees during the twenty-four hours, the greatest depression being always between midnight and daybreak. A thunder-storm and heavy rain in the day or night, always cooled the air, and lowered the mercury from 2 to 10 degrees. On the 17th June, the thermometer for the first time this year reached as high as 90° at 2 P. M., but that was the only day the whole month it rose so high. On the 2d July, the mercury ascended to 91° at 2 P. M., to 90° on the 13th at 3 P. M., and to 91° on the 19th, 20th, and 21st, at 2 P. M.: there was not a day in July in which it did not go beyond 86°, the whole of this month being exceedingly hot and dry; hotter than had been known before in forty years, which caused many to apprehend the occurrence of a hurricane. The quicksilver did not sink at any time of the night below 82°, which rendered that period of the twenty-four hours extremely oppressive, especially when it was calm, as often happened. I have often felt the heat in the day less oppressive at 90° if there was a breeze, than when the air was calm, and the temperature as low as 86° and 84°. The weather was as pleasant to the feelings as could be desired, until the beginning of June, when light dresses became absolutely requisite for comfort. What was unusual, the rays of the sun were seldom obscured during all July, and the thunder-showers, whose refreshing influence is eagerly sought for, and naturally expected in this month, scarcely exceeded in number those of June. August again assumed its wonted livery, and after the 4th of the month, a day rarely passed without the occurrence of thunder and lightning, and a heavy shower of rain in the afternoon, which kept the mercury almost constantly below 90°, and rendered the air infinitely more agreeable to my feelings, than the sultry weather which I had been accustomed to experience in New-York during this month.

Since my residence here, which is now nearly nine months, commencing with December 1823, I do not recollect a day, certainly not two days during winter, spring, and summer, on which the sun was constantly obscured, or the heavens entirely overcast. The climate of the Bahamas, like the limpid, colourless waters that bathe its shores, may with justice be denominated brilliant and transparent. Fogs and mists are utterly unknown, nor is the heat so violent or intolerable as those in the north are led to believe. During all the winter months, nothing could surpass the agreeable, uniform temperature of the air, which was constantly fanned and purified by gentle breezes from the north-west. A case of sickness in an island containing a population of 3000 souls, was at this period quite a rare occurrence.* The dews which at times are heavy, and which may easily be avoided, are the only phenomena at this season which can be considered obnoxious to health. For consumptive patients, I should not hesitate to recommend a winter residence at Nassau, as incomparably preferable to the chilly atmosphere of Montpellier and Nice. The thermometer in winter seldom exceeded 85°, and was only on one day as low as 60°, when several of the natives complained of the intense cold; and what seemed ludicrous and unaccountable, suffered much from *chapped lips!*

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* Certainly none that I heard of was attributed to atmospheric influence.

From winter to the beginning of June, the mercury rises by regular and successive gradations, until it has reached its maximum range, and which may be said to be between 80 and 90° of Fahrenheit. Between these circumscribed limits, it fluctuates until autumn, when it begins to fall again till the commencement of winter.

The uniform law observed in the increments and decrements of heat, prepare and accommodate the system to the temperature of the different months and seasons, and render the changes which take place much more easy to be endured, than those irregular and extraordinary vicissitudes of heat and cold which characterize the climate of the United States.

It must be at the same time admitted, as has been remarked by Humboldt, that the high and steady range of the thermometer during most of the year, greatly augments the sensibility of the body, and in this way gives origin perhaps to that numerous and distressing class of diseases which are seated in the nervous tissue, and so prevalent in tropical countries.

The equableness of temperature in this climate may be judged of from the following Table.

VARIATION OF THE THERMOMETER,

In March,	at	9 A. M. was from	65°	to	81°
April,	at	8 A. M.	70	to	79
May,	at	8 A. M.	75	to	81
May,	at	10 P. M.	73	to	82
June,	at	7 A. M.	74	to	82

June,	at 10 P. M.	74	to 85
July,	at 7 A. M.	81	to 84
July,	at 10 P. M.	81	to 86
August,	at 7 A. M.	79	to 83
August,	at 10 P. M.	79	to 84

The trade winds prevailed almost during the whole period of time to which these observations refer, as will be seen by the table of the weather; the winds from the E. N. E. and S. E. being as four to one in proportion to those from any other quarter of the compass. There being no elevated and extensive tracts of land in this part of the West Indies, to modify the direction of the winds, there are none that can be said to be peculiar or local to the Bahama Islands. They are the same as those that prevail at sea; and often, therefore, when they do change, change very suddenly from one point of the compass to another, making the whole circuit sometimes in a couple of hours; as for example, after continuing steadily for days and nights at S. E. the vane points in a moment to the S.; then in a few moments to the W.; then to the N. W. bringing up a thunder-shower, which, having gone over, the wind comes out at the N. and then gets round again to the point from whence it departed.

The S. E. wind, though so prevalent, is almost as much dreaded at Nassau, as the Maestral, or N. W. at Marseilles. It is thought very damp, oppressive, and unwholesome, especially in winter, when the warm vapours of the Carribean archipelago, with which it comes overcharged, are condensed into heavy dew. I have often, however, seen the sky as clear, and felt the air as pure, apparently, from the S. E., as from any other part of the compass, excepting the N. and N. W., which are cool, bracing breezes, coming with much more force than any of the other winds, and always hailed as a great treat and luxury, particularly in the warm weather.

The N. and N. W. are more prevalent in winter than in summer; but being obliged in their course from the American continent to pass over an extensive space of ocean before they reach these islands, are more often humid than the same wind on the coast of the United States. Hence they are frequently the forerunners of showers and thunder-gusts.

I am informed by General Grant, who is Governor of these islands, and has been for many years residing in the West Indies, that the climate of the Bahamas is much more analogous to that of Bermuda, than to the great mass of islands, which, properly speaking, compose the West Indies.

The Bahamas being the first chain of islands south of the United States, feel more directly the influence of the winds coming from the American continent, than do any other of the West Indies. Hence the climate participates in some degree with that of North America; for the atmosphere during the autumnal and winter months, being so frequently purified and cooled by northerly winds from the continent, the aggregate amount of heat for the year is perhaps less than would be supposed from the parallels of latitude upon which they are situated. Yet Cuba, only two days sail from Nassau, and only one or two degrees more south, is, from its regular land and sea-breezes, which Nassau is not favoured with, said to be a much pleasanter summer residence than this island. I have one thing further to observe on the meteorology of the Bahamas, that the moonlight is remarkably brilliant, so much so, as often to be sufficiently clear to read by, though the inhabitants I find are under an impression that the moonlight of the north, on a cold frosty evening, is much brighter. The brilliancy of the moon here is perhaps owing to the same cause which makes the sun in the tropics hotter and brighter than further north, viz. the greater perpendicularity of its rays.

(To be continued.)

ART. V. REPORT *of* DISEASES *received in the New-York Hospital during the months of August, September, and October*, 1824. By SAMUEL W. MOORE, M. D. of New-York.

To the Editors of the New-York Medical and Physical Journal.

GENTLEMEN,

In compliance with your request to give you a report of the diseases which came under my treatment during my late term of attendance at the New-York Hospital, I herewith send it, to which I have added some general observations. Should you think them worthy of a place in your Journal, they are at your service.

Yours respectfully,
SAMUEL W. MOORE.

48 Warren-street, Dec. 23, 1824.

Diseases.	Cured.	Relieved.	Died.	Remain.	Total.
Apoplexia	1		2		3
Asthenia	1	1	2		4
Asthma	1				1
Bronchitis Chronica	1			1	2
Cephalalgia	1			1	2
Constipatio	1				1
Delirium Tremens	2		2		4
Diarrhœa	5	1	1	2	9
Dysenteria	9			3	12
Dyspepsia	6				6
Enteritis			1		1
Febres	27		6	7	40
Febres Intermittentes	37			7	44
Gastritis			1		1
Hæmoptysis	1		2		3
Hæmaturia	1				1
Hepatitis	1			2	3
Hydrops	2		4	4	10
Icterus	1				1
Nephritis	1				1
Orchitis	1				1
Otitis				1	1
Paralysis	2	1	1	2	6
Phthisis		1	6	2	9
Pneumonia	6			6	12
Rheumatismus	20	5		15	40
Syphilis	9			8	17
Tonsilitis	1				1
Urethritis	3			2	5
Variola			1		1
	141	9	29	63	242

Apoplexy. Three cases of this disease occurred, in two of which it proved fatal. One of these took place in a man, who was brought to the hospital in a state of insensibility, from which he was not roused, and died the night after his admission.

The other fatal case occurred in the hospital, in a patient who had been admitted three days before with jaundice, attended with inflammatory symptoms, for the relief of which he was freely bled, and treated by other antiphlogistic remedies. The supervention of apoplexy in this case, I am disposed to attribute to that sympathy well known to exist between the brain and liver. Proofs of the existence of this sympathy are rendered familiar to us, from being met with almost daily. An able writer on this subject has observed, that "in all derangements of function or structure of the biliary organ, there is hardly a more constant symptom than head-ache, or vertigo, or disturbance of the mental functions."* A valuable paper on jaundice has been lately published by Dr. Marsh, the object of which he states, "is to bring forward instances in which icterus is connected; sometimes with deranged, and even fatal affections of the brain; sometimes with a diseased condition of the mucous membrane of the intestines."† Amongst the most important, and perhaps most frequently fatal effects of this sympathy, may be ranked hydrochephalus occurring in children, where it originates from a deranged condition of chylopoietic viscera; in which cases I believe it invariably happens that there is more or less disturbance in the functions of the liver.

The case of apoplexy which was treated successfully, was that of M'Canna, a strong muscular man, under forty years of age. He was brought to the hospital in a state of complete insensibility, with stertorous breathing, suffused face, dilated pupils, full and slow pulse: a vein was opened, and blood suffered to flow in a full stream, until more than forty ounces had been taken: his breast and abdomen were rubbed with aq. ammoniæ, and an aloetic injection was thrown into the rectum. These means had no effect in rousing him in the smallest degree. His extremities were now becoming cold, and his state appearing very desperate, I determined to try the effect of quickly blistering his legs by means of hot water, and accordingly ordered a bucket of boiling water to be brought immediately: into this pieces of blanket were dipped, and his legs, from the knees to the feet, were wrapped up in them. He showed no evidence of sensibility even to this application, which was several times renewed fresh from the boiling water, until his legs became red and inflamed. After a few hours I visited him again, and found him sweating profusely, rolling his head on the pillow, and making an ineffectual effort to speak: both legs were severely blistered; the injection had operated; his countenance, pulse, and breathing had much improved, and his pupils were less dilated. On the following morning I found him sitting on the side of the bed, appearing quite well, and complaining of nothing but his legs, which were extremely sore. They were dressed with turpentine liniment; some febrile excitement appeared, which was subdued by cathartics and antimonial solution. A few days after this he was removed to a surgical ward, where he slowly recovered from his sore legs.

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* Johnson on Derangements of the Liver and internal organs.

† Dublin Hospital Reports, Vol. III.

Chronic bronchitis. Two cases of this disease were admitted, neither of which appeared to require bleeding. One of them proved very obstinate, under a variety of treatment: the other yielded to moderate evacuations from the bowels; a blister to the breast, with a mixture of copaiva and mucilage, taken three or four times a day, which operated moderately on the bowels, and occasionally vomited.

Cephalalgia. A pretty severe case of this disease, apparently dependent on intestinal irritation, was treated by free purging; giving at night ten grains of calomel, and in the morning an infusion of senna with Epsom salts, and half a drachm of jalap, which was repeated once every two hours, until it produced full effect: by these means he was soon relieved.

The cases of dysentery were not very severe, and were not attended by high excitement: some of them were soon relieved by giving a purgative in the morning, and a dose of Dover's powder at night. In other cases, moderate doses of calomel and Dover's powder were given three or four times a day, and at night a sufficient dose of Dover's powder, to enable them to rest; for which purpose twelve or fifteen grains were generally given. This treatment was found very useful; the gums were generally slightly affected before the cure was completed. In one case, the patient was freely salivated, and his mouth very sore; for which he was directed to use the wash recommended by Mr. Sommé of Antwerp, composed of an ounce of the solution of sub-acetate of lead to one pint of water: this he did with advantage. I observed from it the effect, noticed by others, that of blackening the teeth; but it was not of long continuance. In one case, after the other symptoms had disappeared, free discharges of blood from the bowels continued, unattended by pain. This I endeavoured to restrain, by giving super-acetate of lead in the form of pills, beginning with one grain three times a day, and increasing it to five grains. I was disappointed in the benefit I expected from this treatment, but it was not productive of any unpleasant effect. As a purgative in dysentery, castor-oil and tincture of rhubarb, as recommended by Dr. O'Brien, was much employed.

The cases of fever, which occurred were not generally of a very serious nature: appearing in most instances to be connected with abdominal derangement, they generally yielded to evacuations. In a few cases moderate bleeding was necessary, which was followed by cathartics of calomel and tart. antim., and occasionally senna with salts. Some cases which did not yield to this treatment, or which were admitted at an advanced stage of the disease, and not in a state to allow much depletion, were treated by small doses of calomel and opium with great advantage, at the same time evacuating the bowels moderately by rhubarb and magnesia.

Intermittents were also common: some patients who were received soon after their attack, required nothing more than freely evacuating the stomach and bowels; others, who were not relieved by this treatment, continued until the tongue became clean, took sulphate of quinine, or extract of bark, for a few days, which generally completed the cure.

A case of hæmatemesis with hæmaturia was admitted. As there was at the time considerable excitement, he was immediately bled and purged freely; after which the vomiting of blood ceased, but the discharge of blood from the bladder continued, as he stated, to the amount of a pint daily. After all remaining excitement had been reduced by the use of purgatives, the discharge of blood still continuing, he was directed to take pills, containing super-acetate of lead, three times a day, beginning with one grain, and increasing it to two; which was continued for a few days, during which time the blood discharged was very much diminished, and in a few days ceased altogether.

Several cases of general dropsy occurred, four of which proved fatal. One of these cases, John Miller, was admitted on the 7th of September, with hydro-thorax, ascites, and anasarca. He was unable to lie down without fear of suffocating, and breathed with great difficulty in any posture. He attributed his disease to exposure to rain, while in a state of intoxication, having been previously warm with exercise, and sleeping afterwards in his wet clothes. The exhausted state in which he was brought in, led me to believe he could not survive twenty-four hours. He revived, however, from this state, after taking a little wine and arrow-root. He took, for a few days, a pill night and morning, containing three grains of squill with two of digitalis. During this time his urine, which had been passed very sparingly, was increased in quantity: he also took a solution of cream of tartar, as a common drink. At this time some febrile excitement appearing, he was directed to take, three or four times a day, a pill composed of calomel, aloes, squill, and tartar emetic. These produced free evacuations from the bowels, and increased the flow of urine; they were continued until the 20th, when his mouth becoming sore, they were stopped; he continued the cream of tartar drink. In the meantime his legs, which were much swollen, had been punctured, and discharged freely. From the time he omitted the pills, he took daily a cathartic of comp. powder of jalap, until the 30th, when he recommenced the use of the pills of calomel and aloes, which were again laid aside after a few days, on account of the soreness of his mouth. His legs were punctured on the 3d and 6th of October. He took occasionally a cathartic of rhubarb and super sulphate of potash; and to relieve a troublesome cough, a mixture of oxymel of squill, spirit of nitric æther and paregoric, and a diuretic decoction of senega and squill. Under this treatment he improved daily, his swellings subsided, he was able to sleep in any posture. By the 11th, the swelling of his abdomen and extremities had entirely disappeared; he complained of nothing but a cough—continued to walk about the ward until half-past eight in the evening—and at nine o'clock, one of the patients on going to his bed-side, found him dead. I regretted not having it in my power to examine the body, as the cause of death was not apparent.

Michael Horn, admitted on the 2d of October. This was another fatal case of dropsy. He was a strong, athletic man, about thirty-six years of age. His abdomen was full and tense—lower extremities much swollen—breathing difficult, from distension of his abdomen—pulse full and strong—he did not pass more than half a pint of urine in the twenty-four hours—his bowels very torpid—his eyes and complexion indicated a deranged state of the liver. He was directed to lose blood until it produced a decided effect on his pulse; he was also ordered pills of calomel, aloes, and squill, like those given to Miller. He became faint after sixteen ounces of blood had been taken; his breathing was relieved by the bleeding: his skin became relaxed, and his urine was increased to a pint in twenty-four hours. As he had taken mercury before his admission to the hospital, he was unable to continue the pills more than a day or two on account of the soreness of his mouth. His pulse appearing to require it, and his breathing being oppressed, he was bled on the 3d, and again on the 5th day after his admission, and each time it appeared to afford him temporary relief. He took cream of tartar freely, as a drink, and occasionally a little sulphate of soda was added to his super-tartrate of potash; he also took a decoction of squill and senega. Under this treatment he appeared to improve for some days. On the 9th, his breathing became again difficult, and his abdomen much distended; to relieve which he was tapped, and nearly two gallons of water were drawn off, this afforded him great relief in breathing, and enabled him to pass a comfortable night.—10th. Complained of soreness in the part punctured, from which the water still flowed—continued his diuretic drinks.—12th. Complained of pain in the bowels—had a blister applied to the abdomen—pulse soft and slow—urine increased in quantity. 13th. Better in every respect; abdomen becoming softer—legs less swelled—thinks he passes at least half a gallon of urine a day.—14th. Complains of head-ache, with sickness and inclination to vomit—took a few grains of ipecacuanha. 15th. Head-ache relieved—still complains of sickness—pulse feeble—directed him to take arrowroot and wine, or any thing else his stomach craved.—16th. Stomach rejects whatever is taken—pulse very feeble—ordered warm gin and water, with spice, which he thought he could relish. The irritable state of his stomach continued until he died, which happened within a few hours after my visit.

Jaundice. One case of this disease was admitted in addition to that which terminated in apoplexy. This man was received October the 9th, with symptoms highly inflammatory, skin and adnata more deeply tinged than I ever remember to have seen before. He was immediately bled twenty ounces, and ordered a scruple of calomel; on the following morning, infusion of senna with sulphate of magnesia; and at night, ten grains of calomel, followed again by salts and senna the next morning. This plan was continued a few days longer, and on the 16th he was discharged, cured.

Pneumonia. In this disease, on account of the importance of the organ affected, no time should be lost in subduing inflammation; this we can in no way so well effect after copious bleeding, as by the free use of purgative and nauseating remedies. Shortly after bleeding, from ten to twenty grains of calomel with one or two of tartar emetic should be given, which is to be followed in a few hours by infusion of senna with salts; this to be repeated if necessary at short intervals, until it has produced its full effect. If at the end of a few hours the pain and difficulty of breathing continue, and the state of the pulse demands it, the bleeding should be repeated. In severe attacks of this disease, the bleeding should be carried to the extent of producing faintness or nausea, for when stopped short of this, the operation is almost useless; after this, excitement may generally be kept under by purgatives and antimonial solution of such a degree of strength as the patient can bear. I have sometimes found them able to take twelve or fifteen grains during the day, without vomiting, but I have never given more than that quantity, and seldom as much.

If the pain is not relieved by these means, a blister should be applied; but common as this remedy is, and useful as it very often is, I think it far less important than the other means I have mentioned, and in no severe case should it be considered a substitute for any of them. I have seen many cases which commenced with great severity, speedily subdued by this treatment; on some occasions, expectoration has by these means, been altogehter prevented from taking place; and almost invariably rendered much less troublesome than where a less active treatment has been pursued at the commencement of the attack. In some protracted cases, which have been either altogether neglected, or an inefficient practice employed at the onset, where the disease has appeared to be hastening to a fatal termination, calomel and compound powder of ipecacuanha in the proportion of two grains of the former with three or four of the latter, given every two or three hours, has produced the happiest effects, which became manifest as soon as the gums were moderately affected.

Rheumatism. This is one of the most frequent, and often obstinate diseases, with which a physician in our climate has to contend. In the acute forms of this disease, when it attacks persons of a sanguineous temperament and plethoric habit, bleeding at the commencement of the attack, appears almost indispensable. But I am not generally disposed to think it should be in this, as in some other inflammatory affections, ranked first in importance. Even in the most acute forms of this disease, a treatment by other active means of depletion, to the total exclusion of bleeding, I think more efficacious, than one in which bleeding is relied on as the principal remedy aided by only moderate evacuations from the bowels. Sudorifics, when depended on as the chief agents in the cure, though highly esteemed by some, are in many cases worse than useless: we often see patients bathed in sweat, whose sufferings appear to be rather increased than diminished by it. In short, no evacuations can be substituted for free purgation, which may often supply the place of all others. Purgatives have the power of diminishing the mass of circulating fluids, and promoting absorption where requisite, as certainly, if not as speedily, as it can be effected by bleeding. But what other class of remedies can perform the important offices which belong almost exclusively to them; that of removing accumulations from the bowels, stimulating not only those large glands whose excretory ducts open into the intestines, to disgorge themselves by these channels, but, often affecting the mesenteric glands also, through the stimulus applied to the mouths of the lacteals, and when these organs have been deranged, restoring them to a state in which they can again perform their functions?

Experience in my own person, as well as in others, has convinced me that rheumatism is often essentially connected with a disordered state of the abdominal viscera, and particularly I am inclined to think, with derangement of the liver, at least the frequency with which they are seen occurring together, leads me to believe that it is not to be attributed to mere coincidence. In some cases, the obstinacy of the disease has induced me to suspect such a connexion, even where it was not very apparent, and keeping this in view, in the selection of remedies, experience has proved, that although the pathology may have been wrong, the practice founded on it was right.

With regard to bleeding in this disease, although when carried to a great extent, it is sometimes thought to endanger life by occasioning metastasis to some vital organ, yet at other times, it has appeared to enable the constitution to bear the loss of a great quantity of blood with impunity. I remember to have seen a case of rheumatism some years since, in which the cure was attempted, almost solely by bleeding; on several occasions blood to the amount of forty ounces was drawn, without producing any disposition to faint, and scarcely any effect on the pulse; and subsequently, with the view of effecting this object, fifty-six ounces were taken at one bleeding with as little apparent effect. This patient lost altogether, within a short period, nearly three hundred ounces of blood, and although he did not appear to have sustained any injury from this treatment, he evidently had not at the time I saw him, derived from it the slightest benefit, as his pains continued unabated.

In the commencement of severe attacks of acute rheumatism, where the habit is full, and the constitution vigorous, if the inflammatory symptoms are high, I generally begin the treatment by one pretty free bleeding. Although I am far from thinking it in all cases as essential in this, as in most other phlegmasial diseases, I still believe however, that it often has an important influence in moderating the severity, and shortening the duration of the attack: but I must confess I have, on many occasions, even in the most acute forms of this disease, trusted to other means to the total exclusion of bleeding. These were chiefly active mercurial and saline cathartics, and nauseating remedies, and from the moderate duration, and favourable result, I have no reason to believe that any other mode of treatment could have been more successful, though it might perhaps have been more agreeable to the feelings of the patient. After a single bleeding, I place my chief reliance on the other means above-mentioned, giving from ten to fifteen grains of calomel, occasionally combining with it from one to three grains of tartar emetic, and following it within a few hours by two or three ounces of infusion of senna with Epsom salts, to which is sometimes added from a scruple to half a drachm of powdered jalap. For recommending the addition of jalap, which renders this a much more active purging draught, I am indebted to Doctor Pring. This medicine should be repeated every two or three hours, until it produces full effect. If the excitement is not sufficiently reduced by these means, recourse is generally had to antimonials, given in full or nauseating doses. During the early stage of the disease, the bowels are kept freely purged by giving each night, eight or ten grains of calomel, and on the following morning senna with salts. In some cases, tincture of colchicum has been found useful in producing this effect, given in the dose of one tea-spoonful three or four times a day; and this not only operated freely on the bowels, but often vomited also. By pursuing this plan of treatment, all urgent symptoms will sometimes be removed in a few days, requiring only that a free state of the bowels be maintained for some time longer; this may be affected by giving each night at bed-time, five grains of calomel or blue pill, with an equal quantity of aloes, and giving occasionally in the morning a more active purgative of senna and salts. When the disease is not soon subdued by these means, I have recourse to calomel and opium, giving from two to four grains of calomel, with from a quarter to half a grain of opium four or five times a day, to which is sometimes added, from an eighth to a quarter of a grain of tartar emetic; this is continued until the gums become slightly affected, and relief is generally afforded and shortly after, if not before this effect is produced. Purgatives are then again employed, and continued some time longer.

During the acute stage of the disease, the diet of the patient should consist of little more than barley water, thin gruel, toast, or apple water, and lemonade. At this time little advantage is to be gained from the use of external applications; if they succeed in removing the pain from one part, it will generally attack another; but after active inflammation is subdued, when pain, swelling, and stiffness remain, these means may be employed with great benefit. Among the most useful perhaps, may be reckoned blisters, antimonial ointment, and on some occasions the plaster of ammoniacum. In one case after the subsidence of a general rheumatic affection, all pain having ceased, the power of exerting the muscles, particularly of the limbs, was in a great degree lost; this patient appeared to derive benefit from the use of comp: soap linament, with tincture of cantharides, taking at the same time subcarbonate of ammonia, which Dr. Paris thinks peculiarly useful in such cases, and in this instance, I think it proved so. In the more chronic forms of this disease, warm and vapour baths, where they can be used without subsequent exposure to cold, are often highly useful. The vapour of vinegar and water I have sometimes found more useful than that of water alone. In my own person, I have several times found this to be the case. Where pain has been confined to one spot, which was unattended by symptoms of active inflammation, I have several times tried the effect of acupuncturation, particularly in cases of rheumatism in the loins. On each occasion, I have introduced the needle to the depth from an inch to an inch and a half—sometimes without producing any effect, but often with at least temporary benefit; one patient declared himself relieved from all severe pain, and complained only of some remaining stiffness. At the time Mr. Churchill's publication on this subject first appeared, as I was suffering from rheumatism, I was induced to try the effect on myself, which I repeated many times, and generally with partial relief. I frequently introduced the needle an inch and a half into the mass of lumbar muscles. I am induced to mention this circumstance merely for the sake of stating the fact, that this operation occasions nothing which deserves the name of pain.

The handle, into which the needle is fixed, should be held between the thumb and forefinger, and by giving it a rotatory motion, the needle is to be slowly introduced. A sensation somewhat resembling that which is caused by a very slight burn is perceived as the point is passing through the skin, after which its further advance is not perceptible.

ART. VI. A CASE *of poisoning by* LAUDANUM, *successfully treated by means of Jukes's Syringe.* By SAMUEL W. MOORE, M. D. of New-York.

IN the month of October last, I was called on at an early hour one morning to visit Mrs. B——, about 22 years of age, who, on account of some domestic troubles, as I was informed, had an hour or two before taken laudanum, which, by her own confession, she had done with the intention of destroying herself. I found her strongly disposed to sleep, which her attendants were endeavouring to prevent, but she could not be sufficiently roused to make any exertion: and on making any attempt to do so, she begged earnestly that she might be permitted to sleep. As I was informed before leaving home of the circumstances of the case, I determined, before using any other means for her relief, on immediately trying the effect of throwing warm water into the stomach, and pumping it out by means of the syringe invented for that purpose. I accordingly ordered some warm water to be got ready without delay. As soon as this was done, the patient was raised up in bed, and her head was held back in a proper position to admit of the easy introduction of the œsophagus tube; her teeth were separated, and kept so by means of a wedge placed between them: when the gum-elastic tube, which had been previously well oiled, was passed into the stomach without difficulty, and apparently with no more inconvenience to the patient than is occasioned by thrusting the finger into the throat, as is often done with the intention of exciting vomiting. I then threw into the stomach by means of the syringe a pint of tepid water, and had succeeded in drawing out again one half the quantity of fluid I had introduced, when the patient, whose struggles had made it necessary to hold her, threw her head back, and displaced the wedge from between her teeth. Fearing she might injure the tube, I directed an assistant to withdraw it. As she would not permit me to introduce it a second time, and I was unwilling to leave her without emptying her stomach more completely, I gave her several doses of sulphate of zinc, which vomited her. She was then suffered to sleep for some hours; and on awaking, took a dose of Epsom salts. On visiting her before night, I found her quite well.

The instrument which I employed on this occasion was that which is sold in London under the name of "Jukes's Syringe;" it has a stop-cock at the end, and another at the side, which, when used, must both be turned, in order to open one and shut the other each time it is required to throw the fluid out by a different pipe from that by which it has been admitted. This instrument certainly answers the purpose of its intention very well; but I gladly avail myself of this opportunity to notice an improvement which has been made on it by Messrs. Rose and Sellers, ingenious instrument makers of this city. Mr. Rose was present on the occasion just stated, when he had an opportunity for the first time of seeing this instrument.

Their improvement consists in substituting for the two stop-cocks used in Jukes's syringe one double stop-cock, with an end and lateral pipe; and so constructed, that each time the stop-cock is turned, the communication is necessarily closed with one pipe and opened with the other. The instrument is thus certainly rendered more simple and easy of application.

REVIEW.

Art. I. Elements *of the Etiology and Philosophy of* Epidemics. In two parts. By Joseph Mather Smith, M. D. Fellow of the College of Physicians and Surgeons of the University of the State of New-York, &c. New-York. 8vo. pp. 223. 1824.

New-York has just reason to boast of the successful efforts made by her physicians to extend the knowledge of the causes and phenomena producing and accompanying epidemic diseases. With the exception of Rush, in fact, no writings have appeared on this interesting subject in this country which can even be said to compare with those of Bayley, Miller, Mitchill, and Pascalis. The indefatigable and successful ardour with which these able physicians devoted themselves to the investigation of this intricate and difficult subject, the flood of light which their observations poured on the long-disputed question of contagion, their lucid views of the origin of our pestilential fevers, and finally the diligence with which they collected facts, and the fidelity with which they detailed them, have secured them the most marked distinction both at home and abroad. To them more especially are we indebted for the clear and precise ideas which we at present entertain of the laws of contagion, and for the triumphant overthrow of the absurd belief which had long invested yellow fever with this terrific attribute, and rendered it an object of tenfold horror and dismay. So powerful and irresistible has been the influence of their arguments, and the force of the mass of testimony by which they supported those arguments, that, with perhaps a few exceptions, there is scarcely a physician to be found in our extensive country, who does not consider the existence of contagion in fever as the phantom of a crazed or perverted mind, or as a mere bugbear which interested individuals have set up to catch at popular applause, and recommend themselves to popular support, by exciting the most unfounded alarm, and then offering a well-timed and artful sympathy. Such instances are happily rare; and the experience of every successive epidemic tends more fully to do away the hopeless attempt of reviving the obsolete doctrines of contagion and contagious importation. Among the latest and not the least successful opponents of these doctrines, we should not omit mentioning, and we do it with pride, the name of the learned and eloquent Dr. Coventry, the late President of our State Medical Society. In the several communications which this venerable physician has laid before the public, there have been displayed a vigour and originality of thought, which have extorted praise from almost every quarter, and reflected equal lustre on himself and on the Society which he so ably represented during two successive appointments.

Dr. Smith, with whose book we propose now to make our readers acquainted, has taken up the subject at the point where his predecessors may have been supposed to have left it, had they perfected the views which they conceived, or accomplished the task with which they set out: and had they indeed been able to perform this, the attempt of Dr. Smith would have been timeous, and attended with some prospect of success. Had the causes of epidemic fevers been thoroughly investigated, and their different natures and properties been fully understood, a philosophical arrangement of these causes would not only have been necessary and proper, but it would have been imperiously demanded. This happy period not having yet arrived, (for much as we claim for the writers with whose merited praise we commenced this article, we cannot assume that they even pretended to have brought it about,) it becomes a serious question whether the attempt of Dr. Smith is not premature, and far from likely to produce any satisfactory result. Not only are the general laws governing epidemics not as yet well ascertained, but their origin, and the secret combinations which favour their development in one season and not in another, and likewise those which modify their peculiar character at different periods, are all hidden; nor are they probably within our reach. With what little hope of success, then, any project to arrange such undefined and inappreciable essences or beings in a philosophical or fixed order must be accompanied, is sufficiently evident. By urging this objection, we would not, however, be considered as detracting an iota from the merits of our author, who has displayed ingenuity and talent of no common order.

In the Introduction, Dr. Smith discusses several general points of great interest relating to the causes of epidemics. Contagion of course has a prominent place. Our author observes how truly singular it is, that for a thousand years the small-pox, measles, and scarlatina, committed their ravages without physicians having detected the contagious attribute undoubtedly belonging to them, while on fever they did not hesitate to bestow this doubtful property; and that the same inductive mode of reasoning which developed the true nature and communicability of the exanthematous fevers, led at first to doubts, and finally to a total denial of the contagiousness of fevers. This fact is no less curious, than it appears to us most singularly decisive of the merits of the dispute relating to contagion. We hear and see much of reference to the authority of the ancients; but assuredly they should be viewed with jealousy and suspicion, when their limited opportunities, compared with our own, and their defective and unphilosophical methods of arguing, are taken into consideration. After all, why shall we refer to any authorities excepting those of our own observation and experience, especially on a subject like this, in which the exercise of these is so absolutely necessary, if we would faithfully watch the various and frequent modifications which the influences of time and localities produce in the aspect and history of disease?

In the course of these remarks arises the interesting query, whether bodies, labouring under pestilential disease, may always be approached with impunity? There can be no doubt in the mind of any one acquainted with the phenomena of epidemic diseases, that there is at times danger of contracting disease from the atmosphere surrounding sick bodies. On this admission the contagionists pride themselves not a little: and they insist, that if there is danger, from whatever source, in a room occupied by the sick, they have gained their point to all effectual intents and purposes. We would beg these disputants not to be so fast. From what does the danger arise? Is it from a peculiar secretion essential to the existence of the disease, and of consequence its invariable attendant? Dr. Adams has shown that the poison generated in these cases is not contagion, because it does not necessarily, (as has been with singular pertinacity and error maintained by some,) reproduce the same disease as that with which the sick are affected, which should be the case if that disease were contagious. The product is a typhous fever; it is only developed in places in which cleanliness and ventilation are totally neglected, and it may equally arise where the sick are confined with yellow, bilious, or any other fever, or in fact any other disease. A difficulty, however, would seem to attend cases in which the confined sick are themselves affected with typhus; in which instance the disease reproduced being the same as that prevailing among the sick, it may be cited as an indisputable evidence of contagion. On a little reflection, however, the difficulty vanishes. The disease reproduced is indeed the same, but it is not thus reproduced excepting under peculiar circumstances of filth, &c. which circumstances being removed, the reproduction of the disease ceases. Now, if this reproduction depended upon a contagious attribute in typhus, it should be, not an occasional occurrence only, but one under all circumstances in which bodies approached sufficiently near to be within contact of the poison.

It will be still objected, however, by the *moderate* contagionists, that these diseases are not contagious under *all* circumstances; that they only become so in a foul and vitiated atmosphere. This is, however, to admit that contagion is not an *essential* attribute of these fevers; and if this is given up, then it is really absurd to consider it such when there is superadded to its supposed influence the direct operation of causes which are shown to be sufficient of themselves to produce the effect, without the aid of the gratuitous combination. It has been still further urged as an objection to the view we have here taken, that it involves a neglect of those means of checking the prevalence of pestilential fevers which have been employed with so much success in Great Britain and elsewhere. It requires, however, but a slight insight into all the circumstances of the case, to convince every one, that the necessity and propriety of these measures are far more imperiously deducible from these views than from the childish, superstitious, and vague fears of contagion. In fact, we could never understand how their favourable operation can be satisfactorily explained by contagionists, excepting on the absurd postulatum that an essential attribute of a disease can be rendered inefficient: a position not less contrary to reason than to fact.

We now come to Dr. Smith's arrangement of the remote causes of epidemic diseases, and we shall follow it in regular order.

The first order is *contagion*. This is defined to be "a poison, generated by morbid animal secretion, possessing the power of inducing a like morbid action in healthy bodies, whereby it is reproduced, and indefinitely multiplied." We are truly surprised to find that our author, in a work professing to be philosophical, should have admitted so unphilosophical, loose, and indefensible a classification of contagious diseases as that proposed by Professor Hosack. Our objections to this arrangement have been already so fully stated, in our review of that gentleman's essays, that we deem it unnecessary to enter upon any repetition of them in this place. We have only to express our regret, that Dr. Smith, if he had any permanent reputation in view for his book, should have assented to an arrangement so objectionable, and so little likely to stand the test of time.* It is but justice to Dr. Smith to state, that he has not adopted Dr. H.'s classification in toto. Influenza and cynanche maligna are deservedly erased from the contagious catalogue, where it is matter of serious astonishment that they should ever have been placed. The third class of Dr. H. including fevers mis-named contagious, is of course rejected altogether.

ORDER II. *Infection.* Dr. Smith defines it to be " a febrific agent produced by the decomposition of animal and vegetable substances." It exists in the state of a gas, or miasm, occurring in marshes and filthy houses, hospitals, jails, &c. &c. It has been severally known by the names of *marsh, or paludial miasmata, exhalations of the soil, vegeto-animal effluvium, malaria, human effluvia, febrile and putrid contagion,* &c. To some one of the genera included under this order, every fever of whatever description may be traced.

> " Those who contend that contagion is the first essential of plague and yellow fever, argue, that if these diseases were produced by the exhalations from dead animal and vegetable matters, they would more frequently occur where there are offensive collections of putrefying substances. But this reasoning is by no means satisfactory. It should be recollected, that the qualities of the effluvia exhaled from putrescent substances may be diversified by a variety of circumstances; and particularly by the kind of materials undergoing corruption, their proportions, state of mixture, and degrees of temperature and moisture. The secret influences of the atmosphere, too, especially those which favour the prevalence of pestilential epidemics, may be supposed to have an agency in varying the properties of miasmata." pp. 43, 44.

Under the order Infection, Dr. Smith includes three genera: the two first of which are borrowed from Dr. Miller's arrangement, and the third, which is original with our author, is a compound of the two former.

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* In the last number (V.) of the Westminster Review, for January 1825, p. 135, will be found an interesting article on Contagion and sanitary laws, in which objections to the principle of the arrangement we here oppose are enforced. We are happy to see that independent and able journal enlisted against contagion.

GENUS I. *Koino Miasma.* This includes the effluvia arising from masses of public filth, and from marshes, &c. A high temperature, and a certain degree of moisture, are necessary to the development of this miasm. In this genus are arranged the miasms which produce plague, yellow fever, remittent and intermittent fevers.

GENUS II. *Idio Miasma.* It is produced by animal excretions, accumulated in small and unventilated places, acted upon by heat. Accordingly, it occurs generally in the houses of the poor. It is the source of typhus fever, also known under the name of hospital, or jail fever. Dr. Smith thinks that this form of disease cannot be said to occur epidemically, because the miasm becomes innoxious when diffused in the atmosphere a few feet beyond the apartments in which it is engendered. We cannot altogether subscribe to this opinion. Typhus has prevailed in England too extensively not to be entitled to the name it has there received by way of distinction of epidemic fever. Nor has it been confined there in its ravages to the poor. The rich suffered equally from the disease, and in many places it proved even most fatal among this class.* We admit, however, that it is rare; in this country we believe there is scarcely an example on record, in which the general atmosphere of a city became pestiferous from this cause.

GENUS III. *Idio Koino Miasma;* or a combination of the two former genera, producing compound fevers. We have some doubts as to the propriety of constituting the union of the two miasms already described, a separate genus; in other words, of forming a tertium quid. It is surely very possible that both these may be entirely distinct in their sources, and yet these sources be so near each other as to produce a simultaneous operation, or one nearly so, upon the same individual. This would indeed induce a mixed effect; but it does not necessarily imply that the causes are themselves essentially mixed. Our author himself admits that it is impossible to decide whether the different miasms in this combination are merely in a state of mixture, or chemically united. We would add, that it is equally impossible to decide whether the causes, as such, are mixed at all. We hope, that in offering this objection to our author, we shall not be deemed hypercritical. His arrangement purposes to be a philosophical one, and founded upon strictly inductive principles. Too much jealousy and caution cannot therefore be exercised before we admit any principle, or establish any distinction that is not founded upon the most rigid exactness.

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* See Edinburgh Review for March, 1819. No. LXII. p. 418.

That the effects of the two causes are occasionally combined, there cannot be a doubt. The following is our author's view of it.

> "Let us suppose the circumstances in which typhus originates to occur in summer, such as the crowding of individuals into small apartments, badly ventilated, and rendered offensive by personal and domestic filth. These causes would obviously produce typhus in its ordinary form. But suppose there exist at the same time those exhalations which occasion plague and yellow fever, or intermittent and remittent fevers. Under such circumstances, we should not expect to see any one of those diseases fully and distinctly formed, but a disease of a novel or modified character.
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> "In this country, several memorable instances have occurred within a few years, which will enable us to exemplify the peculiar agency of *idiokoino miasma*." p. 54.

The first instance adduced is that of the Bancker-street fever of 1820, about which so much difference of opinion and acrimony of feeling prevailed. We agree with Dr. Smith that, upon a careful review of all the facts connected with the subject, we are warranted in deciding that this disease was neither genuine typhus nor bilious fever, but a compound of both. In this opinion all the most intelligent physicians who are acquainted with the facts have long since concurred.

The next instances are those of the fevers which appeared in the Philadelphia almshouse in the summer of 1820 and 1821, and which were described by Drs. Klapp and Emerson.

Other instances are mentioned, taken from Pringle. Among these are the Morbus Hungaricus, and plague of Athens.

In some remarks which follow, Dr. Smith takes occasion to mention dysentery, the remote causes of which he very properly refers to the order Infection. In relation to the contagious attribute of dysentery, we observe the following satisfactory paragraph.

> "Dysentery, like other febrile diseases, has long been considered as capable of propagating itself by means of a specific contagion. This error obviously originated from the common observation, that, during the period, when soldiers in camp, or the population of a district are predisposed to dysentery, those persons who surround patients ill of this form of fever, whose excretions are allowed to accumulate in unventilated apartments, frequently sicken with the same disease: but there is surely nothing in this which proves its specific contagiousness. In the majority of cases where the attendants sicken, it is from the same causes which induced the disease of the patient, though in some instances from the noxious vapours generated in his apartment; but in neither case is it certain that they will sicken with dysentery. The form of disease will depend upon the predisposition of the system, and accordingly as this tends to fever or dysentery, will the disease be characterized. Besides, it is undoubtedly true, that when there is an epidemic predisposition to dysentery, the attendants on a *typhous* patient, about whom cleanliness is not strictly observed, will more frequently sicken with that disorder, than the one under which the patient labours. This would be impossible, if the supposed dysenteric contagion were specifically different from the miasm arising from the excreta of those affected with typhus. In both cases the poison is *idio miasma*, and may induce either form of disease." pp. 65, 66.

Species of Infection. Each of the three genera already described is subdivided into two species, the mild and the malignant; to the first of which the Greek ordinal number πρωτος is prefixed, and to the second the intensive particle *per*. Thus the genus Koino Miasma may be either a proto-koino m. or mild species, or a perkoino m. or malignant species; and so with the others. The *proto-koino miasma*, then, includes intermittent and remittent fevers, and the *perkoino miasma* the yellow fever and the plague. To this we must object in most decided terms. 1st. Because we believe that the fevers in these two different species do not merely differ in *degree* of violence, but are *essentially* distinct. And 2dly. Because there is abundant proof to show that it is not a greater intensity of the same causes which alone constitutes the difference between them. We insist the more on this objection, because Dr. Smith himself is equally opposed with ourselves to the view that identifies yellow and bilious remittent fevers. Now, a mere difference of grade would not constitute any essential distinction as to the identity of these two diseases; and besides, bilious remittent frequently assumes a type no less severe than yellow fever, from which it may still be, nevertheless, clearly distinguished. What still further confirms us in the propriety of submitting this objection, is the analogy we derive from the nature of the difference between the two similar species of the next genus—the protidio and the peridio miasma. The first differs from the latter in the single circumstance of being less severe, the fever produced by the former being typhus mitior, and that by the latter typhus gravior.

Order III. *Meteoration.* This includes all atmospheric sources of disease; such as vicissitudes of weather, and also those hidden influences of the air which seem to give energy to the ordinary causes of disease, and render their operation more pervading and certain. This order is divided into two genera: 1st. Sensible, and 2d. Insensible, or epidemic meteoration. The first applies to all those atmospheric causes of disease which are manifest to our senses The second comprehends all those which are not appreciable by our present instrumenss and powers of perception, and is synonymous with the το θειον of Hippocrates, the *seminarium e cœlo demissum* of Diemerbroeck, the *general* or *primary contagion* of Webster, and *the epidemic or pestilential constitutions* of Sydenham.

Influenza, the pneumonia typhodes, which prevailed in this country in the years 1812, 13, the cholera morbus of India, and the Sudor Anglicus of 1483—5, are all referred to this head.

The Second Part of this interesting book is devoted to an inquiry into the philosophy of epidemics. After successfully combating the arrangement of epidemics into vernal and autumnal proposed by Sydenham, into local and general by Webster, and also that by Adams, which altogether excludes contagious diseases; our author lays down the following division, founded upon the three orders of causes formerly described.

1. Contagious Epidemics. These are small-pox, measles, chicken-pox, scarlet fever, and hooping-cough. These diseases attack once only during life, and hence they prevail less generally than other epidemics. They occur in every season, and are sometimes very extensive in their ravages.

2. Infectious Epidemics, or those diseases which arise from the second order infection, and,

3. Meteoratious Epidemics, or those from insensible or epidemic meteoration.

After thus arranging epidemics, our author takes up the highly important consideration of the manner in which they modify and supersede each other. The following general aphorism is laid down.

> "Whenever any of the diseases belonging to the several classes of epidemics, prevail together in the same place, they become involved in each other in the order we have arranged them; e. g. if a *contagious* disorder, prevail during an *infectious* epidemic, the latter will modify the character of the former; and in like manner, if a *meteoratious* epidemic occur with either or both of the preceding diseases, it will assimilate them more or less to its own nature." pp. 139, 140.

This, it will be seen, is a precise and satisfactory elucidation of the general law which has been so generally but vaguely insisted on, that "a prevailing disease swallows up all others, or compels them to wear its livery." It is no less happy than ingenious, and lends to this part of Dr. Smith's volume, peculiar interest and value. The following application of the law just laid down deserves to be read with attention.

> "The diseases which belong to the first class are specific and contagious, and being incapable of poisoning the atmosphere generally, or of affecting persons a second time, cannot impart to the air the power of modifying

other prevailing complaints. The diseases of the second class depend upon the diffusion of a miasmal poison through a considerable tract of the atmosphere; and consequently, all the disorders of the first class, which occur within the circle of its range, are compelled to wear the livery of an infectious fever. The diseases of the third class arise from causes which have a sovereign influence on the human constitution, and of course, when they prevail epidemically, all other disorders assume their character.

"If a more explicit illustration of this law be required, let it be supposed that small-pox and measles are prevalent in a city or country town in which an *infectious* fever, for example bilious remittent fever, is at the same time epidemic. The miasm, which produces the latter, will affect all who are exposed to its influence—every disease will more or less assume the character of the reigning epidemic; and although small-pox and measles are essentially peculiar in their nature, they will nevertheless exhibit the modifying impressions of the prevailing infection. Both diseases will exhibit some of the symptoms of a bilious remittent fever, and their treatment will demand a correspondent modification. And again, suppose that a *meteoratious* epidemic, for instance influenza, appears during the prevalence of the diseases above mentioned. In this case, the small-pox and measles will be modified in a two-fold manner, first, by the infectious poison, and secondly, by the epidemic meteoration which produces the influenza; or, in other words, those disorders will discover the operation of three distinct remote causes, contagion, infection, and meteoration. In like manner, the bilious fever will betray the influence of the two latter. The predominating disease will obviously be the influenza." pp. 140, 141.

Examples are then adduced in proof of the general operation of the law, which we regret that our limits compel us to omit.

In the third section our author treats of the origin of the pyrexious contagions. These he traces at each successive reproduction to a meteoratious cause, which continues to influence their character, and also that of other incidental diseases. The subject is a mysterious one, and we cannot flatter Dr. Smith, that he has thrown much light on it.

In one of the notes to this section, are some very pertinent conclusions in relation to the varioloid disease, and to the undiminished confidence we should continue to maintain in the prophylactic powers of the cow-pox.

Section IV. *Of the varieties of Epidemic Meteoration, and of their laws and modus operandi.* Dr. Smith does not think that epidemic meteoration is of itself sufficient to the production of keino miasmatic diseases. It does, however, favour the development and operation of their causes. When it thus combines with these latter, their joint influence is necessarily exerted with proportionably increased intensity. External nature presents, in general, phenomena by which their presence is denoted, and may even be foreseen. The author is inclined to the opinion, that electricity is a constituent of this meteoratious cause. This is of course mere speculation, and has been often indulged in before, without having as yet led to any very satisfactory conclusion, or practical benefit.

Some have pretended to deny the existence of any secret epidemic influence. That such influence does, however, exist, is sufficiently proved by the presence of effects, which can be attributed to no other causes. Among many instances in proof, we shall be content with citing a fact mentioned by our author in this section, relating to the singular power possessed by every epidemic, of assimilating all cases of disease to uniformity of character. Epidemic diseases vary in their diathesis in different seasons, being highly sthenic in some, and in others asthenic. They also vary in affecting different organs, and this can only be explained by calling in the interposition of a secret atmospherical agent, or of meteoration. Dr. Smith justly observes, that this determinate uniformity possessed by particular epidemics, is a beneficent provision of nature, as it enables physicians, after a short experience, to ascertain the nature of the peculiar treatment which may be necessary in any given epidemic.

We must pass over the remaining sections, for want of room, having already given our readers a pretty minute insight into the object and merits of this excellent treatise. It is not often that we are treated with such display of original thinking and ingenious speculation as we find in this volume. The phraseology and style, are, with a few trifling exceptions, correct, and in the true philosophical spirit, without any of those attempts at *fine writing*, which deform so many of our modern productions on medicine. We now take our leave of Dr.

Smith, expressing the hope that he will not relax in his efforts to collect and arrange all the facts that may come within his reach, and which are calculated to throw light on the important and curious objects of his investigation.

Art. II. Anatomical Investigations, *comprising Descriptions of various Fasciæ of the Human Body; the Discoveries of the Manner in which the Pericardium is formed from the Superficial Fasciæ; the Capsular Ligament of the shoulder joint from the Brachial Fasciæ, and the Capsular Ligament of the hip joint from the Fascia Lata. To which is added, an Account of some irregularities of Structure and Morbid Anatomy; with a description of a new Anatomical Table.* By John D. Godman, M. D. Lecturer on Anatomy and Physiology; Editor of the Journal of Foreign Medicine; Professor of Physiology to the Philadelphia Museum; Member of the Academy of Natural Sciences; Honorary Member of the Medical Societies of Philadelphia, Maryland, Baltimore, Lexington, Cincinnatti, Pittsburg, &c. Phila. H. C. Carey and I. Lea. 1824. 8vo. pp. 134.

Dr. Godman divides his work into eleven sections, the first six of which are devoted to the examination of the various fasciæ of the human body; the seventh to irregularities of structure; the eighth to morbid anatomy; the ninth to some remarks on the hymen; the tenth to the vena azygos dorsalis, and the eleventh to the description of a new anatomical table. The remainder of the volume consists of a translation from the Latin of Scarpa's treatise on the Minute Anatomy of the Bones. We shall examine these sections in the order in which they stand.

Until within a few years the anatomy of the membranes, of which that of the fasciæ forms a subdivision, was an obscure and ill defined chaos; the notions of anatomists upon the subject were crude and indefinite; they gave isolated descriptions of particular portions, usually in connexion with important organs, and by confounding tissues of one class with those of another, rendered the subject complex and almost unintelligible to the student. The eminent French physiologist and philosopher Pinel, first brought forward the idea of arranging the membranes in a general system according to the tissues of which they are composed. He had remarked the differences in structure in these parts, and the striking resemblance of diseases occurring in the same structure in different parts of the body. Thus, in his nosography, he has brought under a general head, all the affections of the serous tissues, as peritonitis, pleuritis, etc.; and under another, all those of the mucous tissues, as catarrh, leucorrhea, etc. Bichat, whose wonderful genius was equalled only by the astonishing industry which enabled him to build up, at an age when men usually commence their literary career, a reputation which would reflect honour on a head gray in study and research, seized upon this idea, and developed it in his admirable work on the Membranes.

Although no improvement has since been made in his general arrangement, much has been done in the minute study of particular portions, and especially in the class in which we are at this time most interested, the *fibrous membranes.* Gimbernat, Scarpa, Cooper, Colles, Ribes, Cloquet, and various others perhaps equally deserving of mention, have turned their attention to the subject, and illustrated several important points in the study of this branch of anatomy. In our country, little has been either attempted or accomplished; and this, perhaps, should be considered as a just ground for the commendation of Dr. Godman, apart from the merits of his work.

The first section commences with an account of the fascia superficialis; an important fibrous membrane, which covers the trunk of a great part of the extremities, the anatomy of which is easily comprehended, when it is regarded as a great whole, though difficult and obscure in the common mode of description. Dr. G. begins by making a crucial incision through the integuments of the abdomen, till he arrives at the fascia, which he then traces downward toward the top of the thigh, till it reaches Poupart's ligament. Near the pubes it receives additional thickness from the cellular substance in that neighbourhood, is continued over the corpora cavernosa penis, and sends a prolongation into the scrotum. It is next traced over the crest of the ilium, when it is found covering the whole of the gluteal muscles.

"As we approach the tubera ischii, the fascia becomes more closely attached to the surface, and in many instances seems to terminate there. This, however, is not the case, as it may be followed across, covering the whole of the perineum, forming the strong fascia, which presents to the knife immediately after the first incision in lithotomy. We trace it from the perineum upward, until we lose it on the under surface of the penis, where it mingles with the covering which this organ derives from the anterior part of the fascia." p. 18.

Returning to the abdomen, the fascia is traced upwards over the sternum and pectoral muscles, spreading backward toward the spine, so as to cover the muscles of the back, and passing under the platysma myoides, ascends to the edge of the neck, where it is lost in cellular and muscular substance. Farther back, however, it passes up to the zygoma, covers the parotid gland, and extends itself over the occipito-frontalis muscle. Dr. G. then traces the fascia in its prolongations and windings in that part so important to practical surgery, the neck, with greater accuracy and precision than any writer we have met with. The subsequent remarks on the different modes in which the knowledge of this fascia may affect the conclusions of physicians, or the operations of surgery, might, we think, have been extended with advantage to a much greater length, and cases cited in confirmation would have had a powerful influence in impressing the anatomy of this membrane upon the mind.

The second section gives a minute account of the fasciæ of the neck, and shows in what manner the sheaths of the great vessels are formed.

"To be convinced of the fact that *all* the fasciæ of the neck are processes of the *fascia superficialis*—to be assured that there are *six* distinct

> layers, or processes of this fascia on the front of the neck, and that the sheath for the vessels is formed by horizontal slips stretching from the anterior to the posterior portion, above, below, and between the jugular vein, carotid artery and eighth pair of nerves, it will be sufficient to pursue the following order of examination." p. 29.

The succeeding description, though neat and accurate, is too long to be quoted entire, and the attempt to condense it would render it unintelligible.

The third section treats of the formation of the pericardium from the fascia superficialis, which Dr. G. traces down the vessels of the neck, till it expands to form this sac.

> "However, singular it may appear that this arrangement should not have been discovered until this time, it is by no means as singular, as that anatomists during so long a time should have remained contented to believe that a *serous* membrane like the *pleura*, could form a strong *fibrous* membrane like the *pericardium*!" p. 34.

We cannot deny that this discovery may have been original in Dr. G., but as the facts have long since been well known to anatomists, we can hardly allow him the honour of having first announced it to the world. Bichat says, "the free disconnected portion of the pericardium is manifestly *serous within*, and *fibrous without*; of the two laminæ which compose it, one is reflected over the origin of the great vessels and heart which it invests, *the other is continued with the fibrous tunic of these vessels*."*

Here we have Dr. G's. *discovery* detailed in such clear and perspicuous language, as to render any comment unnecessary.

The fourth section shows the arrangement of the brachial fascia, and formation of the capsular ligament of the shoulder joint. The superficial anatomy of these parts is detailed with neatness and accuracy, and the mode in which the capsule of the shoulder joint is formed is well described. This too, is claimed in the title page as a discovery; but as in a former instance, Bichat unluckily has a few years the advance of our author. "All the synovial membranes are so united, both to the capsules of the joints when they exist, and to the fibrous sheaths of the tendons, that any separation is next to impossible."* And in another place, "the fibrous membranes, (of which the sheaths of the tendons and fasciæ form a part,) make but one whole, one single organ."

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* Treatise on the Membranes. Boston. 1813, p. 129.

The next section presents us with the dissection of the fascia lata, which forms all the sheaths for the muscles of the thigh, and for the great artery and its branches after it passes through the tendon of the triceps. The mode of demonstration is lucid and ingenious, though too long to be extracted.

> "However difficult the study of the fascia lata may appear from the description, it is by no means so difficult to comprehend when it is examined with the knife. When studied in the manner here directed, the satisfaction derived from the clearer understanding of the physiology of all the neighbouring parts, will more than compensate for the difficulties surmounted by the application necessary to see all that is described. The important influence exercised by the processes of this fascia (forming sheaths for the vessels and muscles) over various surgical diseases and operations, can only be perceived by one who is thoroughly acquainted with its true character, extent, and connexions." p. 45.

The sixth section gives the arrangement of the fascia interna abdominis, and the formation of the hip joint from the fascia lata.

Dr. G. proposes the general name of fascia interna abdominis, for the fibrous membrane continuous with the fascia lata of the thigh, parts of which have received the epithets, transversalis, iliaca, prostata, pelvica, etc. He commences his demonstration of this membrane, by cutting through the muscles of the abdomen midway between the spine of the ilium and the umbilicus, till he reaches the fascia, which he separates from the peritoneum, tracing it throughout the lateral and back parts of the abdomen, till he passes over the liver to the under surface of the diaphragm.

> "Returning to the lower portion of the fascia interna, we raise it from the anterior superior spine of the ilium to the pubis, and in doing this we

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* Treatise on the membranes. Boston. 1813. p. 129.

have a beautiful view of the internal abdominal ring, the space by which the spermatic cord goes through this fascia to emerge on the pubis after passing through the tendon of the external oblique or external abdominal ring. This is the portion of the fascia *interna*, heretofore called fascia *transversalis*, and whose real character is of so much importance to the surgical practitioner. This part of the fascia interna fills the vacancy that would otherwise exist between the inferior edges of the internal oblique and transverse muscles and the edge of the pelvis, and was called fascia transversalis, because it was thought to be continuous with the transverse muscle." p. 49.

He then traces it from the pubic extremity of Poupart's ligament into the pelvis, where it forms the anterior ligaments of the bladder, and the triangular ligament of the urethra, while a process which goes down over the levator ani and obturator internus forms the fascia of the prostate gland.

In regard to the "interesting and surprising manner in which the great capsular ligament is formed from the fascia lata ;" the remarks which we have just made on the capsule of the shoulder joint apply with full force and effect.

Under the head, irregularities of structure, several curious deviations from the ordinary course of nature are recorded. Two of the most interesting of these we shall extract.

"The *muscle* of the *thyroid gland*, was found in the Philadelphia anatomical rooms, twice during the winter, and four times during the month of March (1824.) The first instance was observed by a member of my class, *Mr. Alfred Hartwell*, of N. C. In four of these cases the muscle was on the left side, arising from the upper edge of the left lobe, and going up to be inserted into the os hyoides half-way between the base and appendix of that bone. In the other two instances the muscle arose from the centre of both lobes, through their whole extent, and was inserted directly into the centre of the base of the os hyoides.

"This singular muscle arising from a *gland* and inserted into a *bone*, was first described by Soemmering, and is said to occur once in five hundred subjects. Dr. Horner mentions in his anatomy, that he has not met with it in an experience of many years. From the results of our observations during the last session, I am inclined to believe that it occurs at least in three cases out of five, if it is not to be found in every case. That it may be very easily overlooked when it is confined to the left side, is not surprising when we observe that it runs almost directly in the same course with the thyro-hyoideus, from which it is separated only by very delicate cellular substance, and the portion extending below the origin of the muscle last-mentioned so nearly resembles in colour the ordinary appearance of the membrane covering the gland, or the gland itself. Certain it is, that since our attention has been called to the subject, this muscle has been found in every body examined for the purpose." p. 56, 57.

The following cases of deviation from the ordinary structure, though perhaps rare, are still worthy of remembrance.

"During this winter, (1823–4,) we found *three* instances in which the *arteria innominata* gave off the *right and left carotids* and the right subclavian artery. If the operation of tying up the arteria innominata were performed on a patient, in whom the arteries were thus distributed, what would be the immediate consequence? The whole amount of the circulation would at once be cut off from the right arm, from the upper and central parts of the right side of the thorax, from the whole of the anterior of the neck and the parts about the tongue, the whole of the face and scalp, and from the whole of the anterior part of the brain. The possibility of this distribution should at last make us cautious of recommending this operation, without having most attentively examined all the chances of its failure; even though ever so correctly performed." p. 59, 60.

The eighth section details several instances of morbid organic change of structure, which have fallen under the eye of the author in the course of his dissections. All cases of this kind are interesting to the medical practitioner, and more or less instructive.

Section ninth records three instances in the course of one season, in which Dr. G. met with the hymen in a perfect state. An engraving of one of them is given from a drawing by that admirable draughtsman Mr. Leseur.

In section tenth is described a "vein not figured or described in any book of anatomy to which I have had access, and for which I have proposed the name of azygos dorsalis from its peculiar character."

"This vein lies immediately under the integuments of the back, and emerges at a short distance above the origin of the trapesius muscle. It ascends external to the trapesius as a distinct trunk, receiving branches from both parts of the muscle, until it has risen as high as between the third and fourth dorsal vertebræ. Then it separates into two trunks, which diverge an inch or more from the spine, and penetrate the muscle immediately above the second dorsal vertebræ, and empty their blood into the subclavians by means of the deep-seated cervical veins." p. 78.

The last original article is an account of a table for the use of the dissecting room, and for demonstrations before a class. It is the invention of Mr. Coleman Sellers of Philadelphia, and seems to us to be ingeniously contrived for the purpose for which it is intended.

The remainder of the volume consists of a translation from the Latin of Scarpa's valuable treatise on the Minute Anatomy of the Bones.

This work, as a whole, presents decided proofs of the industry and spirit with which its author pursues the study of anatomy; its style is respectable, and the plates are well executed from drawings which bear the impress of no ordinary graphic talent. Before we leave our author, we take the liberty to suggest, that while investigating the great book of nature, an attentive study of the labours of those who have travelled the same path before him, will render his own journey less difficult, and will prevent his falling into the disagreeable predicament of considering an established fact as a recent discovery.

ART. III. AN EXPOSITION *of the* DANGERS OF INTERMENT *in Cities; illustrated by an Account of the Funeral Rites and Customs of the Hebrews, Greeks, Romans, and primitive Christians; by ancient and modern Ecclesiastical Canons, Civil Statutes, and Municipal Regulations; and by chemical and physical Principles.* Chiefly from the works of VICQ D'AZYR of France, and Professor SCIPIONE PIATTOLI of Modena. With additions by FELIX PASCALIS, M. D. 8vo. 1823. pp. 167. W. B. Gilley. New-York.

WE must apologize to our readers for neglecting so long to notice this work, and to give them some account of its objects and contents. It is not too late, however, to present to their consideration some remarks on a subject which still continues to agitate the public, and on which the whole community are interested. It is the duty of the living to provide for the proper disposition of the dead. In the country generally, and in towns and villages where the population is not great, there is no difficulty; but in large cities, as in Boston, New-York, Philadelphia, Baltimore, &c. where the inhabitants are annually increasing, a question has arisen as to the propriety of interments within their limits. The people of New-York are divided on this subject. The work before us with the above title takes one side of the question, and endeavours to show the "dangers of interment in cities."

In 1822, the yellow fever was endemic in New-York, and as it commenced in the neighbourhood of Trinity Church, the advocates of domestic origin pointed to the burying-ground as one source of the disease. Physicians and others who favour the opinion of importation, traced the disease to a vessel at the foot of Rector-street, in the vicinity of the church and its cemetery. During the summer and autumn of 1822, many cases of sickness and death occurred in the immediate vicinity of this depository of the dead. In the succeeding winter the municipal authority of New-York passed an ordinance prohibiting further interments within the thickly settled parts of the city. This act has given rise to much controversy on the subject of interments, and some have opposed the law, as improperly invading the rights of the people. An appeal has been made to the courts of law, and the question is yet to be decided by a jury of the country. The municipal authority, which is vested in the corporation of the city, has the power to correct and remove nuisances, and in 1813, the Legislature of the State passed an act authorising the local authorities "*to regulate or prevent the interment of the dead within the city.*" The corporation of New-York, in declaring by their act that the burying-grounds in the city were nuisances, and dangerous to the health of the inhabitants, have not acted illegally or tyrannically, because they were authorised so to do whenever, in their judgment, the cemeteries became offensive or dangerous, or were likely to become so. After the sickness of 1822, facts and statements were laid before the Board of Health, that the effluvia arising from Trinity Church burying-ground, and some others, were often offensive, and particularly so during the sickly period. Hence, under the general authority vested in them by the State Legislature, the corporation proceeded to pass the ordinance above mentioned. In so doing, they were supported by the opinions of physicians on both sides of the controverted question of the origin of yellow fever.

If, as one party contends, that this disease is of domestic origin, and that it may arise from the putrid effluvia of burying-grounds as well as other sources of putrefaction, it was necessary that Trinity church-yard should be closed to the future reception of the dead, because it had become overcharged with burials, and was offensive and injurious to health. If one church cemetery had become so, others might, and in passing a law on the subject of interments, it was made general.

On the other hand, it is contended by those who espouse the importation and contagion of yellow fever, that it spreads with greater rapidity and becomes more malignant in an atmosphere contaminated with the effluvia of putrefaction. If, therefore, Trinity church-yard did or might produce offensive emanations, it was necessary to close it, lest by the importation of a contagious disease, it might be rendered more fatal.

Thus the corporation was supported by the doctrines of both parties without espousing either; and with the representations of offensive effluvia arising from the burying-grounds, and being authorised by the laws of the State, they proceeeded to pass an ordinance prohibiting interments in the city.

Dr. Pascalis, a gentleman so long known and distinguished in the medical world, the author and translator of the work under consideration, justifies the proceedings of the corporation, and eulogizes them in the following words, in his preface to the publication.

"I now beg leave to take this method of congratulating my fellow-citizens on the firm and wise plan of operations begun by our magistrates and the

Board of Health. In endeavouring to rescue our city from the visitation of malignant fevers, they have scrupulously avoided enlisting themselves under this or that theorist on the origin of summer and fall fevers. With more prudence and philosophy, they strike at the root of every ostensible source of a calamity that more probably is the effect of a combination of several causes, than the effect of a single one. This procedure has been constituted one of their official duties by the Legislature, in 1813, which directed them "*to regulate or prevent the interment of the dead within the city.*" May they continue to prosecute their task successfully. Public officers are seldom rewarded with public approbation; and the testimony of upright intentions is too often their only recompense; but I hope that these, more fortunate than the generality, will deservedly enjoy the perfect confidence of the community, and the harmonious concurrence of their fellow-citizens in their measures for the present emergency." p. 5.

The work prefaced by the above observations is composed of three parts. The principal part or body of the work contains fifteen chapters, under distinct heads, followed by a series of notes, and an appendix. It contains a body of facts, illustrations, and reasonings, on the dangerous practice of interments in cities; and there is nothing that so strongly fortifies the measures of the corporation in relation to interments in this city. Every good citizen who reads this "Exposition," must be satisfied that it is time to stop burying dead bodies in the midst of a crowded population, and will therefore acquiesce in the ordinance of the corporation preventing interments within certain limits, and providing an extensive burying-ground at a distance from the city.

In order the better to understand the contents of the "Exposition," we shall direct the reader's attention to some of its parts.

The 1st chapter contains a general view of the modes of interment or disposal of the dead in ancient times. Reference to the practice of very remote periods can have very little weight on the propriety or impropriety of the modern practice of interments, and of course this chapter is important only in connecting the history of burials in those times with the less ancient and modern practices.

The 2d chapter is short and compendious, and goes on to show that before the Christian era, burials at a distance from dwellings was practised among the Hebrews.

The 3d and 4th chapters treat of the funeral ceremonies of the Greeks and Romans, in which we find the same general practice prevailing of interments out of cities.

Of the funeral rites of the early Christians, treated of in the 5th chapter, we find much information; and that the salutary custom of interring the dead apart from the living began from various causes to be infringed.

> " The wish of retaining the dead within cities, seemed to increase even by impediments. It became regarded as an enviable privilege to be allowed to occupy after death the places where holy persons had been in the habit of offering their prayers to heaven. And at length they carried their respect so far, as to believe that there were emanations from the bodies of saints, of power to warm the hearts of the devotional, and to yield impressions capable of disposing to fervour and piety." p. 33.

Hence the next step was the introduction of interments into towns and churches. These are treated of in the 6th chapter. The practice was gradually brought about, and the first privilege of the kind was granted to the Emperor Constantine, who was the first of regal dignity to embrace the christian faith. It was for a long time only considered the privilege of kings, and successively became the right of bishops, saints, martyrs, persons of pious lives, and then the rich. Thus it progressed until it became the right of all.

In the 7th chapter of the Exposition, we have a compendious account of the acts of various councils from the 10th to the 18th century, in different Catholic countries against the practice of interments in and about churches. These became necessary at various times in different parts of Europe, in consequence of the departure from primitive and salutary customs, and the injurious effects of such departure. Hence many civil and ecclesiastical laws were ordained to prevent the recurrence of offensive effluvia, sickness, and epidemic diseases which had frequently arisen from burials in churches and cities. Among these are to be found the ordinance of the archbishop of Thoulouse against interment in churches. The translation of the ordinance in full from the French of Vicq D'Azyr is omitted, but the substance of it is given.

The 8th chapter of the Exposition contains entire the pastoral address of the archbishop on this subject. This address is contained in twelve pages of the present publication of Dr. Pascalis. It is an elegant piece of composition, and does great credit to the head and heart that conceived it. It is a moving appeal to the religion and good sense of all concerned, and in its present English dress, it is not wanting in the characteristics of good writing. This chapter alone, distinguished for its strength of argument, and the purity of its religion, would be a treat to the pious, and to all others who seek for information on the dangers of interment in cities.

The same arguments that were used in the time of the archbishop against the laws prohibiting interments in churches and cities, are revived in this city in opposition to the law of the corporation. The right of burial was construed into a right in *fee simple*, and the clergy complained of the curtailment of their revenues.

Thus too some of our fellow-citizens have purchased the right of burial in a city grave-yard, built a vault therein, and have therefore concluded that they possessed an absolute right, (quoad hoc,) and that it was as perfect as a right in fee simple ; whereas this right is qualified or granted for a special purpose, and as it is subject to inspection or supervision by the municipal authorities, and by the late law may be taken away, the parties deeming themselves aggrieved, have no remedy, unless they can show the state law to be unconstitutional.

On the subject of the modern statutes against interments in churches and towns, contained in the 9th chapter, we find it stated in the work under consideration, that

> "Medical men assure us that the vapours exhaling from putrefaction fill the air with chemical compounds dangerous to health, and productive of malignant diseases. The epidemics which prevail in the warm season confirm this assertion." p. 61.

In 1765 a decree was issued by the parliament of Paris to prevent future burials in the city, and to provide for cemeteries at a distance from the suburbs. In the preamble to that decree we have the following statement.

> "Daily complaints are made on the infectious effect of the parish cemeteries, especially when the heats of summer have increased the exhalations; then the air is so corrupted, that the most necessary aliments will only keep a few hours, in the neighbouring houses: this proceeds either from the soil being so completely saturated, that it cannot retain or absorb any longer the putrescent dissolution, or from the too circumscribed extent of the ground for the number of dead annually interred. The same spot is repeatedly used; and by the carelessness of those who inter the dead, the graves are, perhaps, often re-opened too soon." p. 58.

The following account is given of the causes which operated in originating, and afterwards perpetuating the practice of burying the dead in cities.

> "The practice of intermixing the dead with the living, would never have grown to such an intolerable height, though aided by all the pride of the great, all the immorality of the rich, and the desire of distinction inherent in all ranks, if the reverence for the relics of saints, and the blind belief in the power of the church over souls after death, had not rooted in the hearts of the people, a strong conviction that a grave in the cloister, the galilee, the portico, the chapel or the aisle, was a strong hold for protection against the arch-enemy, and a passport to heaven. As this superstition declined, or became modified, the practice to which it had given rise still continued, and grew more and more immoveable the more it was habitual. It is the same in thousands of things to this day, even where the original motive is forgotten, and such is the force of custom, that it continues in cemeteries consecrated by the vicinity of particular churches to so great a degree, that the peace of the grave is continually violated to crowd new tenants into the spot hallowed by them in life, by pious associations." p. 64, 65.

To prove the danger of interments in cities and in churches, either in graves or vaults, the facts contained in the 10th and 11th chapters, and in the appendix, are too numerous to extract, but they will be found strong and pointed. All those who are interested in the question, either for or against the late ordinance of the corporation, ought to read this book, or at least these two chapters, as containing facts upon which our reasoning on either side must be based.

> "The rulers of mankind (says the author of the Exposition in the 12th chapter,) have not devoted much consideration to the investigation of the causes which might so far corrupt the atmosphere, as to create mortal diseases at particular periods of time, or why these plagues should always appear in the vicinity of stagnant waters; shallow ponds; marshes; low and muddy lands; receptacles of dead animals or vegetable substances; in the neighbourhood of the slain after battle: in cities ravished by famine and conflagration; why columns of air have been rendered so noxious, that the very birds that attempted to fly through them, fell and perished: why the winds, disseminating their aerial poison, transported the breath of pestilence into rich, fertile, and thickly inhabited districts. With the story of such terrible devastations, the pages of history are filled; and they have been accounted for as the result of divine anger, as the wrath of heaven against conquerors, or even as a provision of providence to rid the earth of a superfluous population!" p. 93

There is nothing very particular to call the attention of our readers in the 13th chapter, on the topography of New-York, nor in the 14th chapter, being a refutation of the objections raised against the prohibition of interment within certain limits of this city. The 15th and last chapter contains a plan and description of a general cemetery, or "*Polyandrium.*" There are some sensible remarks in this chapter, whichis from the pen of Dr. Pascalis; but as our limits forbid further quotations, we respectfully refer our readers to the original.

The work under consideration is partly a translation, partly a compilation, and partly original. The translation appears to be free and not literal, and is well executed. Some of the facts are compiled with reference to authorities. In the part which is original, we think there is an improvement in the style of writing, if we may judge from what we have seen of other writings of Dr. Pascalis. On the whole, whether the book is well or badly written or composed, the facts contained in it speak for themselves.

The question now at issue between the corporation of the city and the proprietors of vaults, turns upon the right of property in the soil where vaults are built, thereby avoiding the main question. If it shall be determined that the right is absolute, then the practice of burial in the city must be renewed. It is therefore incumbent on the community to be informed, and hear both sides of the question, and as the work before us appears not to have circulated very extensively, it is recommended to the attention of the public as containing an able exposition of one side of the controverted question of interments. It is not our intention to enter into the argument, but simply to give an outline of the object and contents of the work.

ART. IV. ANALES *de la Academia de Medicina de Buenos Ayres.* No. I. Agosto de 1823. Buenos Ayres. 1823.

ANNALS *of the Academy of Medicine of Buenos Ayres.* No. I. pp. 99. August 1823. Buenos Ayres. 1823.

THE appearance of a work like the present from South America, is a novelty which we take great pleasure in presenting to the notice of our readers, and which we hope may prove merely the prelude to a series of contributions to medical science from a portion of our globe rising every day in interest and importance. We shall give a brief analysis of it, principally with a view of making our readers acquainted with the nature and objects of the "academy," and the spirit with which it has commenced its labours.

Besides an Introduction, in which the medical character and institutions of our own country are spoken of in the most flattering terms, the Number contains six articles. The first article is the Discourse delivered before the Academy at the opening of the sessions for the year 1823, on the 19th of April of that year, by the Secretary, Don Juan Antonio Fernandez. It appears from this discourse that the Academy was first installed by a supreme decree of the government on the 18th of April, 1822. After adopting a constitution, they proceeded to select the list of subjects which should be proposed for the premiums offered by the government. The sixth subject involves the consideration of *trismus nascentium* and *angina gangrenosa*, two diseases very prevalent in the country among children.

The second article is a memoir on the new alkalies, cinchonina and quinina, discovered in the cinchona by Mess. Pelletier and Caventou. This paper is principally abstracted from a memoir on the same subject published at Paris, and was read before the Academy by Don Manuel Moreno.

The third article is a memoir on the use of iodine in bronchocele and scrofula, by the same.

The fourth article is the record of a case of confluent small-pox occurring in a child of fourteen months old, and complicated with croup. The child died, and on dissection a white and mucous substance was found on the superior portion of the œsophagus; the velum pendulum palati was red, and had the appearance of having been inflamed. The larynx was more affected, and all its anterior surface covered with a false membrane or albuminous exudation; the opening of the glottis was entirely closed, partly by this concretion and partly by a mucous matter. No other viscus presented any marks of disease.

The fifth article is a memoir on the use of the nitro-muriatic acid bath in hepatic affections, by Mr. James Lepper.

The sixth and last article is a discourse serving for an introductory lecture to a course of chemistry, by Don Manuel Moreno.

The following is the *Program*, or table of the objectsof the Academy for 1823.

1. Situation of Buenos Ayres, its atmosphere, temperature, and variations. 2. Composition and quality of its soil, and of its water. 3. Physical character of the inhabitants. 4. Moral disposition of the same, prior to and after the Revolution. 5. Nature of the aliments in use; influence of these upon the two preceding. 6. Customs observed in Buenos Ayres. 7. Diseases peculiar to the country. 8. Diseases peculiar to the different seasons. 9. Remedies in use in the country. 10. Accounts of new methods of cure pub-

lished in Europe. 11. Observations on private hygiene proper to Buenos Ayres. 12. Do. on public hygiene. 13. Project for a pharmaceutic code. 14. Labours for the Flora Argentina. 15. Do. for a geology of the country.

The following are proposed as Prize Questions by the Academy—the premium for each to be a gold medal of the value of two hundred dollars.

"What causes produce in our country the Angina Gangrenosa, and what is its method of cure?"

"To determine the general modification which the European modes of cure must undergo in order to be applicable to the diseases of this country?"

"What causes can produce in these countries the disease known under the name of Trismus Nascentium, and what is its mode of cure?"

The seal of the Academy represents the temple of Minerva, supported by six columns—on its cupola the sun—in its centre the genius of liberty, with other emblems; and around, the following inscription: *Medicinæ ac Naturalium Scientiarum Bonaerensis Academiæ.*

Medical and Philosophical Intelligence.

FOREIGN.

Rupture of the Vena Cava.—M. Dommanget relates the case of an officer of light infantry, of the army of Spain, aged twenty-five, who had enjoyed general good health until a month prior to the 23d of December, 1822, when he was confined to his house by a catarrhal affection, followed by an inflammation of the pleura on the right side. An antiphlogistic treatment removed these affections; but, on the 25th, the patient experiencing a dull pain between the shoulders, two cupping glasses were applied, and the pain disappeared. He continued to get better, and on the 30th was completely convalescent, passing the day with his comrades, and going to bed apparently in good health. On the 31st, at nine o'clock in the morning, the patient complained suddenly of a pain resembling the colic, situated just below the pit of the stomach, with a sensation of weight at the epigastric region, which he supposed to be occasioned by the weight of something which he could not get rid of, notwithstanding the frequent endeavours to vomit which he experienced. When seen by Dr. Berge (in the absence of M. Dommanget,) he was found sitting upon his bed, his body leaning forwards, the hands crossed upon the epigastric region, which he was pressing forcibly, complaining of deep-seated and very violent pains; the abdomen retracted; the face pale and pinched in; respiration laboured, and a small, but not frequent, pulse. The patient lived in this condition about two hours, making repeated efforts to vomit, the respiration becoming gradually quicker, and the sense of suffocation more intense. Dissection showed at once the cause of this officer's death. The lungs were in a healthy condition, but at the lower part, on the right side, a quantity of coagulum, weighing thirty-six ounces, was found, and at least twelve ounces of bloody serum; on the left side another coagulum, weighing two ounces, was found, and the lung on this side had contracted, at its upper part, some slight adhesions to the pleura costalis. On examining, a tumor of two inches and a half in width, by five inches in length, was found on the right side of the vertebral column, in the course of the vena cava: towards the middle of this tumor were several abrasions, or ragged openings of the pleura, about half an inch in length, from which the blood had escaped into the chest. On dissecting the tumor carefully, it presented the appearance of a substance analogous to the spleen, though not quite so firm: fibres, running in every direction, were observed. In the centre of this fungous tumor, which appeared to be a recent formation, there was a rent parallel to that in the pleura, corresponding to a canal ten lines in diameter, which formed a substitute for the vena cava for the space of about four inches and a half, extending to the right auricle. Two other tumors, resembling the former, were found,—one in the left side of the chest, the other on the small curvature of the stomach, near the cardiac extremity. The author concludes the above tumor to have been of the nature of fungus hæmatodes.—*Lon. Med. & Phys. Jour.*

Hydrocyanic Acid in Tænia.—M. Galneche, of Stettin, records the following case.—A boy, three and a half years old, who was afflicted with the *tænia lata*, was recommended to eat strawberries for two days in as great quantities as he pleases, the author observing that where the presence of this worm is suspected, the strawberry generally produces a discharge of some few portions. The third day, at six in the morning, half an ounce of castor-oil was given; at half-past six, seven, and half-past seven, he took each time fifteen grs. of the powder of male fern root; and, at eight o'clock, six drachms of castor-oil. At half-past eight an abundant serous motion took place, and a quarter of an ell of the worm escaped from the anus; the little patient was then placed upon warm water, into which the worm was suffered to be suspended; it was slightly laid hold of at the orifice of the anus, and rubbed over for the space of four inches, with hydrocyanic acid. It immediately made strong efforts to return into the abdomen, so that it was obliged to be held with some degree of force; it suffered some convulsive motions, and was expelled the length of an ell and a half. At the termination of an hour and a half, another evacuation produced the remainder of the worm, two ells long: the animal was dead, it terminated in a threadlike extremity, surmounted with a reddish head of the size of a millet seed, armed with a little sucker.—*Ibid.*

Common Salt to correct the fœtor of Cancerous Sores.—M. Liaubon relates the case of a female with a cancerous ulcer in the right breast, who suffered extremely from the fœtor of the discharge, which was so intolerable, that the person who assisted in dressing the wound could scarcely remain in the room. M. Liaubon ordered a lotion of salt, dissolved in water, to wash the parts: the disease was not arrested by these means, but the fœtor was entirely destroyed.—*Ibid.*

Substitute for Castor Oil.—M. Hufeland asserts, that by mixing one drop of the oil of Croton with an ounce of the syrup of poppy, a preparation is obtained, resembling, in a great degree, the Castor oil, and of which one spoonful produces analogous effects. Many successful experiments have been made with this preparation in the Polyclinic School at Berlin.—*Ibid.*

Efficacy of Nitrate of Potass in the treatment of Hemorrhage.—Dr. Zuccari, after various other remedies had proved unsuccessful, had recourse to *pure* nitrate of potass, and asserts, that it had been followed by continued success. He administered it as follows:—After a small bleeding, which was not always necessary, he mixed nitrate of potass, in the quantity of from four to six drachms, in an ounce of gum water, two or three tablespoonfuls of which were taken every hour; and refrigerant drinks, with light soup. The dose of the nitrate has been carried to the extent of an ounce, in the same quantity of the vehicle above mentioned, without producing any inconvenience. The author of the paper adds, that he is about to publish a work on the subject.—*Ibid.*

Sugar in the Blood of diabetic Patients.—MM. Vauquelin and Legelas D'Etchepare relate, that, taking advantage of the admission of a woman, fifty years of age, labouring under diabetes, into the Hôtel Dieu, under the care of Dr. Asselin, they determined to put to the proof the assertion made in the Dictionnaire des Sciences Medicales, article *Diabetes*, relative to the presence of sugar in the blood of patients affected with this disease; an assertion which, although in conformity with the theoretical views of certain physiologists, is in direct contradiction to the results obtained by many skilful experimentalists, particularly MM. Dupuytren and Thenard. In consequence of inflammatory symptoms rendering two large bleedings necessary, the blood was analysed twice with the utmost care; but it was not possible to discover a single atom of sugar, although the urine which the patient passed, to the amount of nine or ten pints in the day, contained a seventh part of the substance. The saliva, also, examined at two different times, was entirely free from all trace of sugar.

The author of the article in the Dictionary having proposed urea as a remedy in this disease, the patient was put upon the use of it for several days; and the urine made during its exhibition was analysed, in the hopes of discovering some traces of it. But the search was in vain: the urine retained its morbid qualities, but was considerably augmented in quantity. It is scarcely necessary to observe, that this result does not prove that the sugar is formed by the kidneys. It may, in fact, exist in the blood, and yet may not be detectable by our methods of analysis, as was demonstrated in the case of urea, by the labours of MM. Prevost and Dumas, as well as our own.—*Ibid.*

Mercury in the Urine.—Dr. Canton has made the following experiments: —Sixty pounds of the urine of syphilitic patients, under the use of mercurial frictions, became alkaline in a short space of time, giving an abundant precipitate, which was separated by filteration. The fluid, subjected to various trials, did not afford any indication of the presence of mercury. The precipitate, mixed with equal weights of charcoal and carbonate of potash, and a sufficient quantity of water to form a paste, was submitted gradually to a red heat in a glass retort, the neck of which was plunged into a receiver filled with water. At the termination of the experiment, a pulvurulent precipitate was observed, which, after having been dried, gave out globules of quicksilver by simple compression: the quantity appeared to amount to more than twenty grains. The neck of the retort also contained a considerable number of small globules.—*Ibid.*

Utility of fresh Vegetebles in Fever, when placed near the Patient.—We have received a letter from Mr. S. Shatte, of Stokenham, Devon, the purport of which is to call to our notice a practice formerly recommended by some of the ancient writers on medicine, and which, he says, he has found of great service in fevers of the typhoid kind. A short extract from our venerable correspondent's letter will explain his meaning sufficiently.

"In 1821, when typhus fever was very prevalent in this neighbourhood, I made several trials of this remedy. G. F., in the village of Chillington, who was taken ill with that disease, having a wife and two children, with only two small rooms up stairs: I immediately had the rooms and the bed covered with wet bushes or boughs of ash, hazle, willow, or any green shrubs that could be procured. The old ones were carried out, and fresh ones brought in every morning: and I am of opinion that, when they are brought in with the dew upon them, they are more efficacious: at all events, they must be made very wet with cold water, and be in considerable quantities, so as to cover the whole room."

In one case, our correspondent adds that they appeared to revive a patient almost at the point of death.

Mr. S. adds several quotations from Fernelius, Nic. Fontano, &c. who advocate the same practice; and finally he objects, and we think with great reason, to the abstraction of large quantities of blood in pure fever likely to assume a typhoid character.—*Ibid.*

On the active Principle of Colocynth (*Colocyntine.*)—The following account is extracted from a paper by M. Vauquelin:—

Colocynth, treated with alcohol, yields the bitter substance much purer than when water is used. The alcoholic solution, evaporated, yields a very brittle substance, of a gold-yellow colour, which, when put into cold water, produces a solution, whilst white opaque filaments remain, which ultimately form a soft, semi-transparent, yellow mass, resembling some resins. If the aqueous solution be heated, it becomes turbid, and there form, both on its surface and at its bottom, yellow drops, resembling a fused resin; these, when cold, become hard and brittle. The solution, re-heated, is again rendered turbid; and this effect is produced until the whole is evaporated.

It is found, on examination, that the substance remaining undissolved by the water at first, is of the same nature as that dissolved, and may itself be dissolved in abundance of water. It appears that the first portion of water dissolves more than the second or third, from the presence probably of some acid taken up by it. A yellowish-brown extractive matter also appears to be present; for the first solution is much more coloured than the second, and the product of the second solution evaporated appears to be much purer than that of the first. If, by successive operations, the resin-like substance be separated, the last, or mother liquor, contains a substance considerably soluble in water, and but slightly troubled by infusion of galls: the turbidness is occasioned probably by the presence of the bitter substance, a portion, as is evident to the taste, remaining.

The bitter resin-like substance is slightly soluble in water; considerably so in alkaline solutions; abundantly precipitated by infusion of galls, but not at all by acetate of lead. When heated, it yields a white vapour, of which the taste is not bitter, and leaves a very bulky charcoal. Nitric acid dissolves it, and the acid is decomposed, acting upon the substance, although with difficulty. If the solution be diluted, part of the substance precipitates in very bitter white flocculi.

This substance, containing the bitterness of the colocynth, appears to M. Vauquelin to be a particular principle. It is very soluble in alcohol, less so by far in water, but giving a solution of extreme bitterness, and frothing on agitation. He proposes for it the name of Colocyntine.—*Ibid.*

Experiments made upon six decapitated Robbers. By Professer Bartels.—On the 14th October, 1811, six highway robbers were beheaded near Marburg; one of them was sixty years of age, the other five from twenty to thirty. At the instant when the head of the first fell, the trunk got up again, as if the individual had been about to rise upon his feet, while the bodies of the others fell down flat at the very moment: when a little after the heads were thrown at the foot of the scaffold, we saw all the muscles of the face of the last executed completely relax, while those of the old man presented a general contraction, which lasted for a considerable time. These opposite effects took place without the occurrence of any difference in the mode of decapitation to which they could be attributed; with respect to this, it will not be useless to remark, that there remained at least two vertebræ attached to each of the heads. It was observed, that, at the moment of decapitation, the muscles of the face of the greater number of the heads contracted in a convulsive manner. As the head of the first decapitated had not been brought with the rest, no other observations were made with regard to it. The second, which fell ten minutes after it, was observed without loss of time. It was tried at first to excite a contraction of the iris, by pricking that organ, but no apparent motion was obtained. The same operation having been made upon the iris of the third head, the pupil dilated a little, and again quickly contracted; while, at the same time, the pupil of the other eye (which had not been pricked) contracted, and again immediately dilated; an effect which Professor Trenderoth, as well as Messrs. Bunger and Herold, who were also present, saw in the most evident manner. Some minutes after decapitation, the bodies were opened: the heart contracted and dilated alternately with much force, in such a manner as to produce regular pulsations. At the end of ten minutes these motions had, it is true, abated a little; but they were always incessant, and the alternate contraction and dilatation preserved their regularity. Five minutes later, these motions had become unequal and very weak; they revived, however, when the heart was irritated by pinching it. A mechanical irritation made upon a branch of the great sympathetic, accelerated a little the motion of the heart, but only for a minute at most; the motion itself, however, continued for a long time, only decreasing in intensity. A puncture made in the transverse muscle of the abdomen of the same body occasioned strong convulsions, especially in the lower extremities, and yet the nerves had not been immediately irritated. A mechanical irritation made at the lower part of the spinal marrow, caused violent contractions in the muscles of the trunk, as well as in those of the neck, particularly those of the upper part, at the place of the section (which had already been frequently remarked.) On irritating the upper part of the spinal marrow of another head, convulsive motions were produced in the muscles of the face, and there resulted a movement of the tongue and surrounding muscles. In the third body, a motion was remarked in the lower part of the trachea which remained attached to the trunk: this motion was accompanied with a sort of hissing an effect caused without doubt by the convulsive contractions of the muscles which had been cut. Similar motions took place in all the others. The head of the last decapitated was transported to the theatre, which, on account of the distance, occasioned the loss of an hour. Here, our first care was to try the duration of the galvanic irritation upon the different muscles of the head. The elevator-muscle of the upper eyelid, and the superior oblique muscle no longer contracted; but the frontal muscles, the orbicularis palpebrarum, masseter, digastric, &c. still continued to contract. The contractions ceased first in the masseter muscle; they were prolonged in the buccinator. Two hours after execution, it had entirely ceased in all the muscles, and it could not be excited on moistening them anew. In another head, cut off twenty minutes at least before the preceding, the galvanic irritation caused the depressor commissuræ labiarum, the orbicularis palpebrarum, and masseter, to contract; this latter always much longer than the others. Two hours and three quarters after decapitation, the muscles of this head appeared to have lost all irritability. Before concluding our experiments upon the head of the last decapitated, we exposed the pectoralis major and minor of a body which was brought in. The large pectoral muscle alone contracted under the influence of the galvanic fluid, the muscles of the abdomen no longer contracted; contraction took place only in the right triceps muscle, and in the sartorius; they ceased always in the latter half an hour sooner than in the other. Irritation applied to the transverse muscle of this body, no longer produced contraction; which we attributed to the circumstance that the body had been opened at the place of execution, after the first experiment. In another body, which had been opened at the same time, the application of galvanism also produced some motions, as well as a feeble contraction, which was not renewed: mechanical irritation produced none. An hour and a half after execution, the natural motion of the heart had ceased in the bodies already carried to the theatre. We were still, however, in hopes to produce contraction by means of irritation; not being able to get at the heart of the body which had been first opened, we proceeded to that of a body which had been newly opened. This last had also retained its heat, principally in the internal parts; the heart still contained a little blood, of a deep colour, in the left ventricle, which was partly fluid and partly coagulated; but we could not, either mechanically or by means of galvanism, excite any contraction of the muscular fibres of the heart.—*London Medical Repository.*

On the Detection of Hydrocyanic Acid in the bodies of Animals poisoned by it.—The Report on a Memoir by M. Laissaigne on this subject, states, that having prepared the pure hydrocyanic acid, according to M. Gay Lussac's method, it was diluted with five times its weight of water to retard its spontaneous decomposition. A ten thousandth of this acid in water could be detected by persulphate of iron; i. e. a grain of the diluted acid being added to eighteen ounces of water, was rendered sensible by the action of the ferruginous salt.

This test, although very delicate, is surpassed by another, in which copper is used, and which will detect the one-twenty-thousandth of the hydrocyanic acid in solution in water. The mode of operation is to render the liquid containing the hydrocyanic acid slightly alkaline with potash; add a few drops of sulphate of copper, and afterwards sufficient muriatic acid to re-dissolve the excess of oxide of copper. The liquid appears more or less milky, according to the quantity of hydrocyanic acid present. A singular property of the precipitate thus diffused through twenty thousand parts of water, is, that after some hours it re-dissolves, especially if the muriatic acid added be in sensible excess.

Nitrate of silver is also a good re-agent for detecting hydrocyanic acid, but the appearance too much resembles that produced by the presence of muriatic acid.

A cat was poisoned by twelve drops of the hydrocyanic acid in sixty drops of water; the animal died one minute after having swallowed the poison. At the moment of its death a vapour came from its throat, smelling strongly of the acid, and a paper moistened with alkali, when held to it, was afterwards rendered blue by persulphate of iron. The animal was retained at the temperature of 50° F. for eighteen hours, and then opened. The odour of prussic acid was readily perceived in the brain, spinal marrow, and thoracic organs. It was but slightly sensible in the stomach, which contained nothing but mucus; but on cutting the organ in pieces it was developed. The stomach was cut into pieces under water, and distilled with the water; when about an eighth of the liquid had passed over, it was mixed with potash and persulphate of iron, and soon gave a feeble blue tint, leaving no doubt of the presence of hydrocyanic acid. The test by copper gave it still more sensibly. The copper tested prussic acid also in the intestines, but the persulphate of iron did not.

The experiments repeated on a young cat, with one drop of the acid, gave the same results.

A dog being poisoned by twelve drops of the acid, died in half an hour. The body was opened fifty-three hours after death, and both the contents of the stomach and the stomach itself, distilled as before, gave, by sulphate of copper, decided proofs of the presence of the prussic acid.

Four drops diluted with water were injected into the rectum of a young cat; forty-eight hours after death the intestine was extracted and examined, and gave evidence of the presence of the poison.

M. Laissaigne observes, that when the quantity of hydrocyanic acid is very small, its presence is not shown by the sulphate of iron until twelve, or even eighteen hours after its addition, whilst the sulphate of copper discovers it immediately; and that the effect of the latter had frequently disappeared before the first had become evident. The experiments indicate—

1. That, from a ten thousandth to a twenty thousandth of hydrocyanic acid may be discovered in solution in water. 2. That when animals have been poisoned by hydrocyanic acid, traces of the poison may be discovered in them from eighteen to forty-eight hours after death. 3. That it is always in the parts into which the poison has been introduced, that it may be discovered. 4. That it has as yet been impossible to show the existence of the poison in the brain, the spinal marrow, or the heart, although these organs evolve an odour sufficient to excite suspicion of its presence.—*Ibid.*

Active Principle of the Daphné Alpina.—The following conclusions have been arrived at by M. Vauquelin, in consequence of experiments on this plant:—

1. That the irritating principle of the daphnes is a volatile oil.

2. That it is during the vegetation of the plants, when they contain most of the volatile oil, that they possess most energy.

3. That this oil being gradually converted into resin, the irritating powers of the plant diminish in proportion.

4. That a certain quantity of resin being formed, defends the rest of the oil from a similar change, and that it is in consequence of this circumstance that old plants retain, to a certain degree, the power of acting on the skin.

5. That this oil, as well as the acid accompanying it in infusions of the plants, is precipitated by acetate of lead, from which precipitate it cannot be separated by sulphuretted hydrogen.

6. That, nevertheless, this same oil may be separated from the sulphuret of lead by means of boiling alcohol, but that it remains combined with sulphur.—*Ibid.*

Mr. A. Robertson's Case of Fracture within the Capsular Ligament.—"On the 25th of June, 1822, William Darwin, aged sixty-two, a tall athletic convict, of a sanguine temperament, fell, with a very inconsiderable violence, across a piece of timber in the Dock-yard, his left hip coming in contact with the wood. On rising, he felt an acute pain in the region of the acetabulum, but no other inconvenience, for he walked on board to exhibit himself to the surgery man.

"From finding him *ranked up* with the sick of the hulk on my morning visit of the 26th, from his walking on board, and from his own account of the accident, I did not suspect any serious injury of the joint, and treated the case as one of concussion. On the 29th, however, he complained of a very sudden and very agonizing accession of pain, which induced me to subject him to a more critical examination. No evident alteration in the size of either hip could be discerned, but a shortening of the limb was conspicuous, which was rendered more evident by making him stand on the sound limb; extension removed this difference, but on being freed from restraint it again assumed its morbid shape; the knee and foot were everted, and rotation greatly increased his pain.

"I removed him to the hospital as a case of fracture within the capsule, but continued attention for a period of six months to position (chiefly with the view of restraining the motion of the pelvis, and of securing the limb,) made no other alteration in the symptoms than a gradual diminution of pain. A pair of crutches were given him, he was placed on the invalid list, and remained so till the 26th of December, when he died from a general dropsy.

"On dissection, the injury proved a transverse fracture of the head of the femur, within the capsular ligament. No species of union had taken place. The upper portion of the fractured bone was retained in situ by the sound ligament; tolerably smooth on its surface, but without any ossific deposit. The lower portion very irregular, with several detached pieces of bone adhering to the insertion of the capsular ligament. Between the acetabulum and the portion of bone retained in situ by the ligament were several small, oval-shaped, loose, cartilaginous substances, apparently fragments of bone. The capsular ligament was partially lacerated, in a line above the trochanter major, and greatly thickened in its insertions."—*Anderson's Quarterly Journal.*

Mr. Hebb's Case of Poisoning by Oxalic Acid.—A man, aged fifty-seven, swallowed an ounce of oxalic acid, dissolved in a tea-cupful of water, believing it to be Epsom salts, and notwithstanding all the medical means which could be employed, he died. He complained chiefly of great pain in his back and thighs, and inability to move his limbs. Afterwards the abdomen became painful to the touch, and much black matter was evacuated from the bowels, mixed with bloody shreds.

"*Dissection.*—I examined the body, about ten hours after death, in the presence of several medical gentlemen.

"The upper extremities, chest, and back, were much discoloured; the face had the appearance of one who had been hung; a considerable quantity of dark, frothy fluid, had issued from his mouth; the abdomen was tumid. On cutting into the cavity of the peritoneum, a small quantity of sanguineous fluid escaped. There was nothing remarkable in the general appearance of the viscera, excepting the great distention and discolouration of the small intestines.

"The mucous membrane of the pharynx and œsophagus appeared as if it had been scalded; that of the latter easily separated from the muscular coat, and on it were seen a number of minute, elevated, and opaque patches. The stomach contained about a quarter of a pint of thickish fluid; its villous coat was excessively pulpy, in many places of a black colour, in others highly inflamed. The mucous membrane of the small intestines exhibited pretty much the same appearances as that of the stomach, though in a less degree; they contained a small quantity of reddish pulpy fluid. There were many large patches of extravasated blood in the large intestines. The peritoneal coat of the stomach and intestines was much inflamed. The liver and gall-bladder appeared healthy; the latter was nearly empty. The spleen was smaller and harder than usual. The kidneys were healthy, but the pelvis of each was considerably more vascular than ordinary, and this extended a little way through the ureter. The bladder was natural; it contained a considerable quantity of urine. The mucous membrane of the larynx and trachea, and the lungs themselves, were intensely inflamed. There was no fluid in the pericardium, and the heart was healthy."—*Ibid.*

M. Zinc on the Danger of exhibiting Iodine.—M. Zinc has lately communicated two cases of fatal effects from the incautious use of iodine internally; and a third, in which unpleasant symptoms were induced, but they yielded to a proper treatment. In one case there were besides diarrhœa, priapism, tremors of the whole body, but especially of the arms; violent palpitations, and other nervous symptoms. The body was not opened, In the second fatal case, the symptoms are not detailed, but dissection exhibited violent gastro-enteritis and other traces of inflammation. These cases strongly confirm the remarks of Dr. Gardiner respecting the caution necessary in the exhibition of this medicine internally.—*Ibid.*

Extirpation of the Uterus. By Professor Palletta.—A Piedmontese woman, who had had several children, was admitted into the Civil Hospital of Milan, in consequence of an ulcerated tumour at the head of the neck of the uterus, attended with sero-sanguinolent discharge. Suspecting that the disease was cancerous, Palletta resolved on extirpating it. On the 13th April, 1812, he introduced one hand into the vagina, and by means of it, applied separately the two blades of a spoon-shaped forceps, so as to grasp the tumour at its root. But as the base was very broad, and the body ulcerated and uneven, the forceps tore away before the cutting instrument could be applied. The hand was again introduced, the tumour again grasped, the upper part of the vagina cut through with a curved pair of scissors, and the tumour detached, partly with them, partly with a sickle-shaped knife. The incisions were guided by an induration which Palietta felt with the finger of the hand in the vagina, and which he considered as the basis of the tumour. As soon as the tumour was detached, Paletta extracted it, and then removed a portion which still remained in the vagina. The operation was quickly performed, and the patient bore it well. The bleeding which Paletta had expected to be considerable, was not greater than in any common operation. The vagina, when examined by the finger, presented a large cavity: this was filled with soft charpie, sprinkled with an absorbing powder, and the patient put to bed.

After the operation, the tumour was examined in the presence of Palletta, Monteggia, and many assistants. To their very great astonishment they found that it was a smooth, round, and unwounded body, with a sarcomatous tumour projecting from it. At first glance it was evident that this body was the uterus, with its cavity, without the Fallopian tubes, which were cut away close to its surface, and without any trace of the vagina at its lower part. The body of the uterus was somewhat hard and enlarged, and evidently diseased.

Six hours after the operation the patient was easy, had not lost any blood, and merely complained of pain on coughing or deep respiration. On the following day there was convulsive shivering, with vomiting and pain in the abdomen. The countenance was not changed; there was a pale bloody discharge, and the pulse was weak. On the third day the vomiting, though less frequent, continued; the belly was not tense, but painful on the right side; the pulse soft and compressible. The patient became gradually weaker, and died in the night.

On dissection, the omentum was found covering the intestines, and adherent to the peritoneum on both sides of the urinary bladder; the firmness of the connexion was such as to shew that it was not recent. The upper part of the intestines about the umbilicus were slightly inflamed. There was considerable inflammation of the peritoneum on the right side, extending over the diaphragm, liver, colon, and jejunum, with an effusion of turbid serum under the liver, and on the concavity of the os ileum of that side. On raising the last convolutions of the ileum an opening and cavity were to be seen, from which the uterus had been removed, and which were about the level of the linea innominata: on the iliac edge of this opening were the Fallopian tubes, cut across, and a little inflamed. There were not any traces of extravasated blood in any part of the pelvis, and the bladder and rectum were perfectly sound. Professor Palletta concludes from the examination that a subacute inflammation of the membranous surfaces had previously existed, and that to this, aggravated by the operation, the effusion of serum and the fatal event of the case were both attributable.—*Ibid.*

M. Velpeau's Pathology of Phlegmasia Dolens.—The author has related three cases of this disease, in all of which some aleration, more or less considerable, was found at the sacro-iliac symphisis of the same side on which the limb was affected; purulent effusions in the peritoneum, particularly about the genital organs; abscesses in the diseased limb; and lastly, a mixture of pus and coagulated blood in the veins of the limb, with evident traces of inflammation of their coats in two of the cases. M. Velpeau regards the alteration of the symphises as the original source of the disease, which afterwards becomes extended to the limb: the veins, according to him, being only consecutively affected, whether the pus in their cavities may have been originally formed there, or introduced by absorption. The veins were incompletely obliterated. These facts agree with the observations of M. Bouillard on the causes of certain kinds of dropsy; and our readers will find, by referring to our analysis of Dr. Davis's paper, in the last volume of the Medico-Chirurgical Transactions, that these cases are in confirmation of his views, although his opinions are not entirely the same as those of M. Velpeau.—*Ibid.*

M. Recamier's Case of softening of the Brain.—"The patient, a female, aged forty-four, was subject, for the last nine years of her life, to epileptic attacks. They supervened at first from a fright, and became less frequent and less severe, so that she had intervals of three, four, or eleven months between each. The menses having ceased at the end of February, she was seized with a paroxysm of epilepsy, which left after it violent cephalalgia, and a constant, but peculiar kind of stupor. On the third day after the paroxysm, the *left* side was paralysed both in the faculty of motion and of feeling. Convulsive motions, attended with loss of recollection, came on during the fifth day. They scarcely presented any interval, and were much more marked in the limbs of the left side. She died on the eleventh day.

"*Dissection.*—Softening of the substance of the convolutions of the brain was remarked in the superior and anterior parts of the right hemisphere, to the extent of three inches in each direction. The grey substance was softened to a nearly diffluent state, and presented a grey gelatinous appearance. The medullary part of the brain was equally softened, was of a dull white colour, friable, and granulated. The pia mater, penetrating the anfractuosities of this portion of the brain, was considerably thickened, as well as that part of it connected with the arachnoid. This latter presented a milky appearance. Professor Recamier regarded the semi-gelatinous softening of the grey substance of the brain as the result of a chronic inflammation intimately connected with the state of the pia mater and arachnoid, which had given rise to the previous attacks of epilepsy, whilst the dull-white softening of the medullary part had occasioned the paralysis that supervened shortly before the patient's death."—*Ibid.*

M. Cruveilhier on the Anatomical Structure of the Trachea and Bronchia.—This is a valuable paper, and as it may lead to interesting discovery, we shall give a copious abstract.

"Wherefore," says M. Cruveilhier, "are the cartilaginous rings of the trachea replaced behind by a membrane? It is, say some, in order to facilitate the dilatation of the œsophagus; but this opinion is evidently erroneous, because the trachea and œsophagus are moveable in all directions, and if the œsophagus could not dilate forwards, it might dilate itself in the direction of both its sides. The structure of the trachea of certain animals, as that of the bullock and sheep, prove moreover this fact. Indeed, it may be remarked, that the cartilaginous rings terminate behind in an acute angle, in the form of the hearts on playing cards. The membranous part exists *within* this angle, which is not very yielding, considering the thinness of the cartilages behind the membranous part. The structure of this membranous part essentially consists of transverse muscular fibres, the use of which is evidently to bring together the extremities of the rings, and consequently to diminish the diameter of the trachea. As a proof that such is their office, the extent of the membranous parts is according to the degree of constriction of the trachea requisite to the different modulations of voice. Man, in whom the voice presents so extensive a scale of tone, has a trachea with a large membranous part supplying the place were the cartilaginous rings terminate. In the bullock the rings terminate behind by two convex extremities, which are generally broader than in the rest of the cylinder. The membranous structure is placed within this posterior part of the cylinder, nearly at the same relative distance from its anterior concavity, as in man. The portion of the rings prolonged behind the membranous part is much thinner and softer than that before it, so that they may be easily applied closely to each other, and thus permit the trachea to be narrowed, although much less than in man. Assuming the diameter of the trachea to be six, it may be constricted to four in man, and to five in the bullock.

"In attempting to determine the structure and uses of the longitudinal projecting lines, perceptible on the membranous portion of the trachea, I observed that these lines are formed of fasciculi of fibres, which I considered at first to be muscular, but which are evidently albugineous. These fibres line the whole cavity of the trachea, and are disposed, in a uniform manner, on all the cartilaginous part, whilst they form small fasciculi towards the membranous portion, imparting to it greater solidity, and facilitating the transverse foldings of the mucous surface. This fibrous membrane, intimately united to the mucous tunic on one part, and to the cartilaginous rings on the other, forms, by becoming thicker, fibrous rings separating the cartilaginous rings, but occupying only their posterior or inner aspect, the rest of the interval between the cartilaginous rings being filled by a white adipose tissue, hitherto little known, and which covers, anteriorly, another very thin layer of fibrous tissue, that appears to be the perichondrium, extended from the first to the last of these rings. This adipose tissue, which in animals occupies the same space, is placed behind the transverse membrane. The fibrous membrane lining the cavity of the trachea is very elastic, and imparts much solidity to it, especially in its divisions.

"*Structure of the Bronchiæ.*—The bronchiæ present the same structure as the trachea; but the bronchial ramifications offer some remarkable peculiarities. Here, indeed, there is more of the membranous part, but the cylindrical form is complete; the cartilaginous rings are replaced by segments of circles of several lines in breadth at their middle part, forming very nearly the third of the circumference of the cylinder. Each segment terminates in an elongated point, which is continuous with, or passes into fibrous tissue. Sometimes two adjoining rings are united at their middle portions. The rings are so disposed, that the one glides within the other, and they move with so great facility, that a slight pressure of the fingers causes a diminution of one half of the diameter of each cylinder. The albugineous longitudinal fibres, disposed in fasciculi, extend to the farthest extremities of the bronchial conduits, and support the fibro-cartilaginous segments: if this support is removed by dividing the fibres, the extremities of the segments project into the interior of the cylinder. A muscular membrane, consisting of circular fibres, also occupies the interior of the cylinders. May not this structure be viewed as a perfect apparatus of motion, and may it not be concluded that, were it possible for the eye to observe its operation during life, the bronchial conduits would be found to contract themselves to one half of their diameter, or even nearly to their entire obliteration, when exposed to chemical or other physical influences of an irritating nature?

"*The Lungs.*—At the margin of each division, the cartilaginous segments of the bronchiæ assume a particular form, so that the two fibro-cartilaginous laminæ unite in order to form a very acute angle; a confirmation the most suitable for dividing the inspired column of air. The fibro-cartilaginous plate which corresponds to the continuation of the bronchial conduit, is larger than that which belongs to the branch given off from it. The cartilaginous rings sooon disappear; but this species of mechanism at the bronchial divisions continues to the entrance into a lobule. That part of the bronchial canal deprived of cartilaginous rings is very considerable, and is solely composed of the mucous membrane, of the fibrous fasciculi, and of circular muscular fibres. The bronchiæ and their divisions are united, by a loose laminar tissue, to the venous and arterial vessels, to the nerves, and to the pulmonary lobules belonging to these parts.

"On isolating the bronchial lobules in a small lung which I had submitted to a very fine injection, I had occasion to observe their relations, and to remark that those of the superfices come in contact at their adjoining margins, leaving also intervals between them, which are filled with other lobules. The lymphatic vessels are distributed in the cellular line interposed between these lobules. The blood-vessels begin not to be superficial until at the part where the cartilaginous rings disappear, and then they assume the tortuous disposition observable in the extremities of all the vessels. Respiration, or rather its offices, seem to be executed as well in this situation as in the vesicles of the lobules. These lobules are composed of vessels excessively delicate and minutely divided, and sustained by a very fine laminar tissue. The pneumo-gastric nerves proceed exclusively to the muscular tunic."—*Ibid.*

Hydrocyanic Acid.—Two remarkable cases of death took place not long ago, within twenty-four hours, at a country seat, in the environs of Paris, of two healthy men, one aged nineteen, and the other forty years. Several young gentlemen, students of medicine and surgery were successively called, who could observe still some symptoms of the last victim whose agony lasted much longer. They regularly proceeded to an apparently correct autopsic examination of the two subjects, and they made a very detailed report, ascribing death to apoplexy; having found no visceral lesion whatever, nor the least proof by chemical tests of the presence of any mineral or metallic poison. The subscribers to the report confessed however, that of vegetable poisons which leave no sensible alteration, and are also inodorous, they could affirm nothing in the case. Subsequently to that event, Dr. Pierquin published a very instructive *medico-legal dissertation*, to prove that the two unfortunate men had been, or might have been poisoned by the prussic acid, contained in a simple extract or distilled water of the prunus lauro-cerasus, which too often ornaments French gardens.

He infers that injection or congestion of the cerebral apparatus is not sufficient to constitute apoplexy. This supposes the existence of pre-disposing organic causes of a simultaneous diagnosis, and of subsequent symptoms which were by no means designated in the above cases. He then relates a number of cases of poisoning by prussic acid from vegetable substances, in which the necroscopic appearances were perfectly similar to the preceding. And after analysing the various circumstances observed by the reporters, such as the flexibility of the body after death, the involuntary dejections, the anhelous respiration, the lock-jaw and froth at the mouth, the sebacic animal odor of the fluids found in the stomach, the slight appearances of inflammation on the gastric membrane, and the great quantity of azote emitted with the intestinal gases; he adduces them as characteristic of the hydrocyanic poison, and justly censures the reporters for not having tested the fluid found in the stomach upon some domestic animal!

DOMESTIC.

Transactions of the Medical Society of the State of New-York for the year 1825. Albany, 1825.

The Society met at the Capitol, in the City of Albany, pursuant to a statute of the State, on Tuesday the 1st of February, 1825. The following gentlemen took their seats as permanent members or delegates from their respective County Medical Societies, viz.:

Dr. John H. Steel, Vice President, Saratoga.
— William Bay, Albany.

Dr. Henry L. Van Dyck, Columbia.
— Eliel T. Foote, Chatauque.
— E. Wallace, Westchester.
— John Van Name, Rensselaer.
— James M'Naughton, College of Physicians and Surgeons of the Western District.
— Royal Ross, Chenango.
— Felix Pascalis, New-York.
— Peter Wendell, Albany.
— James R. Manley, New-York.
— Henry Van Hovenburgh, Ulster.
— Daniel Ayres, Montgomery.
— T. Romeyn Beck, Albany.
— Platt Williams, Albany.
— Laurens Hull, Oneida.
— James M'Goffin, Schenectady.
— Joshua Converse, Schoharie.
— Delos White, Otsego.
— Anthony Gage, Yates.
— Thomas Greenly, Madison.
— Samuel Freeman, Saratoga.
— Abram Allen, Washington.
— Stephen Todd, Herkimer.
— James Faulkner, Livingston.
— James Pettit, Onondaga.

The following gentlemen were elected officers for the ensuing year, viz. :

Dr. James R. Manley, *President.*
— Theodrio Romeyn Beck, *Vice President.*
— Platt Williams, *Secretary.*
— Jonathan Eights, *Treasurer.*

CENSORS.

Dr. Felix Pascalis,	*Southern District.*
— Charles Drake,	
— John B. Beck,	
— Wiliam Bay,	*Middle District.*
— Peter Wendell,	
— Jonathan Eights,	
— Abram Allen,	*Eastern District.*
— Daniel Ayres,	
— John H. Steel,	
— Alexander Coventry,	*Western District.*
— Laurens Hull,	
— Luther Guiteau,	

Royal Ross,
Stephen Todd.
Eliel T. Foote,
Henry P. Van Dyck,
Delos White,
Joshua Converse,
Samuel Freeman,
Anthony Gage,
Committee of Correspondence.

The prize questions adopted by the society, for the year 1826, are the following, viz.:

1. The history, causes, and treatment of hooping-cough.
2. The history of goitre, shewing in what sections of the United States it is prevalent—what atmospheric or topographical influence aggravates it, and by what remedy it can best be relieved or cured.

University of the State of New-York.

College of Physicians and Surgeons of the Western District.—The Regents of the University have conferred the Degree of Doctor of Medicine upon the following gentlemen, students of this College:

Stephen V. R. Bogert of Albany, on *Hernia.*
Charles B. Coventry of Oneida Co., on *Purulent Ophthalmia.*
David Coon of Herkimer Co., on *Necrosis.*
Alvin Cowl do. on *Croup.*
Almison Fitch of Delaware Co., on *Ergot.*
David Y. Foot of Madison Co., on *Puerperal Fever.*
Joel Gray of Washington Co., on *Carbon.*
Hiram Hadley of New-Hampshire, on *Iodine.*
John S. W. Hellen of Beaufort, (N. C.,) on the *Typhus Mitior of North-Carolina.*
Thomas Jefferson Jones of Herkimer Co., on *Alcohol.*
Garritt P. Judd of Oneida Co., on *Variolæ Vaccinæ.*
Joel Lull of Otsego Co., on *Aneurism of the Heart.*
Patrick M'Craith of Otsego Co., on *Chronic Inflammation.*
Rufus Priest of Herkimer Co., on *Measles.*
Charles Van Ess of Oneida Co., on *Mania.*

Medical Schools of the United States and number of pupils.—There are fourteen medical schools in the United States, viz. seven in New-England, three in the Middle, two in the Southern, and two in the Western States. Their names, and the number of pupils frequenting them, are as follows:

Medical School of Maine, Bowdoin College, (Brunswick,)	60
Medical School of Dartmouth College, (Hanover, N. H.)	80
Massachusetts Medical College, (Boston,)	130
Berkshire Medical Institution, (Pittsfield, Mass.)	100
Medical School of Yale College, (New-Haven, Conn.)	110

Castleton Medical Academy, (Vermont,)	130
Medical School of the University of Vermont, (Burlington,)	60
Medical School of the University of New-York, Western District (Fairfield,)	120
Medical School of the University of New-York, (city of New-York,)	196
Medical School of Pennsylvania, (Philadelphia,)	480
Medical School of Maryland, (Baltimore,)	300
Medical School of Charleston, (S. C.)	50
Medical School of Ohio, (Cincinnati,)	40
Medical School of Transylvania University, (Lexington, Ky.)	200
Total.	2056

[*New-York Monthly Chronicle.*]

Results of Meteorological Observations for 1824, *kept at Albany.* By T. Romeyn Beck, M. D.

Mean temperature at 7 A. M.	42° 71
Mean temperature at 2 P. M.	54 26
Mean temperature at 9 P. M.	46 49
Mean of all the observations,	47 28
Greatest height of the Thermometer,	89
Lowest height of do.	—3
Greatest annual range,	92
Greatest monthly range,	60
Greatest daily range,	30

Weather.

Clear days,	134
Cloudy days,	131
Variable	101
Rain, number of days on which it fell,	83
Snow, number of days on which it fell,	19

Quantity of rain during the year (January, February, March, November, and December excepted,) 21° 86.

Winds.

North,	32 days.	South,	49 days.
North-east,	11	South-west,	25
East,	1	West,	51
South-east,	103	North-west.	94

Prevailing wind, south-east.

Civiale's Lithontriptor.—We have seen in the possession of Dr. Mott, the beautiful and ingenious instrument, called the lithontriptor, invented by Mons. Civiale of Paris, for boring the calculus in the bladder. From the high character which is given of this instrument by the committee of the

French academy of medicine, consisting of Barons Percy and Chaussier, we hope that it may supersede any of the cutting instruments. Dr. Mott has commenced preparing a patient for the trial of the lithontriptor, by enlarging the urethra with bougies. We hope to be able in our next number to give the result.

Dr. Smith's Case of Poisoning.—A Miss H—— of Cincinnati, designing to take a large dose of common salts, swallowed instead, in a state of solution, between two and three ounces of salt petre, *nitras potassæ.* She was immediately made sensible of the mistake by an excruciating pain and distress at the pit of the stomach. Her mother called on an apothecary, living next door, to inquire her danger and what was to be done. He advised to send instantly for a physician, and administered ten grains of tartar emetic.

Dr. Smith soon came, and considering her agony, and that the emetic was little disposed, or likely to occasion an ejection, he promptly employed the excellent apparatus consisting of a gum elastic tube and exhausting syringe; the former of which he passed through the mouth into the stomach, and with the latter soon introduced a considerable quantity of tepid water, which, together with the solution of salt petre and tartar emetic, he again extracted. This process was continued till the fluid drawn from the stomach was as tasteless as when thrown into it. The whole quantity of water employed, within a few minutes, amounted to about four gallons. After the stomach was thoroughly cleansed and emptied, he introduced three or four ounces of sweet oil, and withdrew the tube.

The operation was less painful than the effects of an active emetic, and proved completely successful. We have related the above case with the double object of inciting people generally to more caution, and also to recommend the remedy employed.

Salt petre is an article in such common use, and so nearly resembles Glauber salts in its appearance, that instances similar in kind, though happily not in degree, often occur. A small quantity is generally followed by a long continued disorder of the stomach, and is frequently fatal. It should never be laid by without the paper enclosing it being marked, in legible characters, *Salt Petre.*

QUARTERLY BIBLIOGRAPHICAL NOTICES.

A Compendious System of Midwifery, chiefly designed to facilitate the inquiries of those who may be pursuing this branch of study. Illustrated by occasional cases. With thirteen engravings. By William P. Dewees, M. D. Lecturer on Midwifery; Member of the American Philosophical Society, &c. pp. 602. Philadelphia. H. C. Carey & J. Lea. 1824.

From the ample experience of Dr. Dewees in this branch of professional study and practice, and from the ability with which his essays were written, we had formed high expectations of the merits of this work before we saw it. These expectations we are happy to add have not failed of fulfilment in every respect. As a comprehensive, accurate, and minute text book to both student and practitioner, Dr. Dewees' work is inferior to no other extant. Its intended republication in England, is a gratifying testimony of the value set upon it even there. We hope shortly to present our readers with a detailed account of this excellent system.

An Essay on the Danger of Interments in Cities; translated from a work entitled "Essais sur les lieux et des Sepultures," &c. By Vicq D'Azyr, D. R. de la Faculté de Médicine de Paris, &c. &c. New-York. 1824. pp. 82.

This translation of Vicq D'Azyr's Essay was made at the request of a Committee of the New-York Board of Health, and is every way worthy the attention of our citizens at the present moment, when so much excitement prevails in relation to the recent ordinance of our city corporation, by which interments in the city are prohibited. It is proper to state, that much of the Essay of D'Azyr will be found in a condensed form in the work of Dr. Pascalis, which we have already noticed in our Review department.

The New-York Monthly Chronicle of Medicine and Surgery. Conducted by an Association of Physicians. Nos. 7, 8, and 9. New-York. 1825.

We conceive the medical public is laid under many obligations to the conductors of this journal, whoever they may be, for the spirit of impartiality and independence with which it has been conducted. It has done much, and we hope it may do more, to rouse the attention of the profession to existing abuses. We sincerely wish it success.

On the Utility of Country Medical Institutions: an Introductory Lecture, delivered at the College of Physicians and Surgeons of the Western District of the State of New-York, December 18, 1824. By T. Romeyn Beck, M. D. Professor of the Institutes of Medicine and Lecturer on Medical Jurisprudence in the College of Physicians and Surgeons of the Western District of the State of New-York, &c. Published at the request of the Class. pp. 20. Albany. 1825.

A Physiological Essay on Digestion. By Nathan R. Smith, M. D. Professor of Anatomy and Physiology in the University of Vermont. New-York. pp. 93. 1825.

We shall review this work in our next.

NOTICES.

To the Patrons of the New-York Medical and Physical Journal.

New-York, March 1, 1825.

My connexion with the New-York Medical and Physical Journal terminated with the publication of the third volume.

JOHN W. FRANCIS.

Dr. J. Kearny Rodgers will, in November next, commence a course of Lectures on Anatomy. As the end of this branch of medical education is its application to practice, it will be the constant endeavour of Dr. Rodgers to bear in mind its connexion with medicine, obstetrics, and, more particularly, surgery.

State Medical License.—Candidates wishing to obtain licenses to practise Medicine and Surgery, are informed, that the Censors of the State Medical Society for the Southern District will hold their examinations in the city of New-York. They are requested to apply to either of the censors.

FELIX PASCALIS, M. D.
CHARLES DRAKE, M. D. } Censors.
JOHN B. BECK, M. D.

We regret that it is out of our power to publish the names of the candidates recommended for the degree in medicine by the trustees of the College of Physicians and Surgeons in this city. When this sheet went to press, the list was still pending before the regents.

To Readers and Correspondents.

Our next number will contain communications from Professor Willoughby, Drs. C. B. Coventry, Townsend, Pascalis, Bell, Peixotto, &c. &c.

Errata.

Page 92, 4th line from bottom, dele "and" before "so constructed."
—— 92, 12th do. dele "of its intention."

Fig. 1

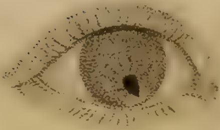


Fig. 2

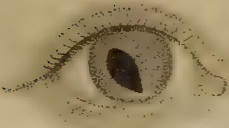


Fig: 3

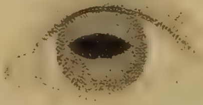


Fig. 4

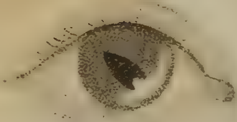


Fig. 5

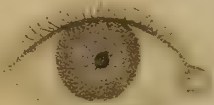


Fig. 6

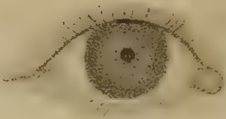


Fig. 7

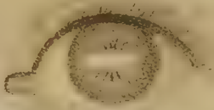


Fig. 8

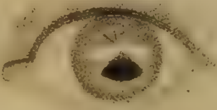


Fig. 9

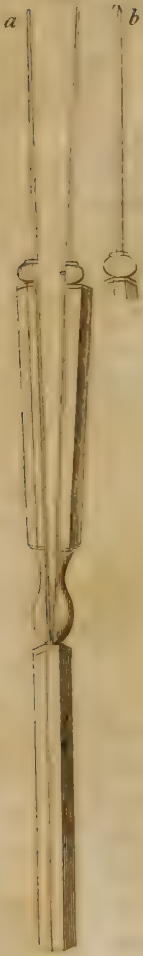
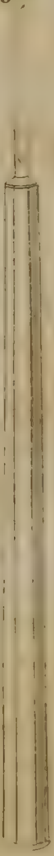


Fig. 10



J Bell M.D. del.

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Art. I. On Artificial Pupil. By Edward Delafield, M. D. Surgeon to the New-York Eye Infirmary, and Lecturer on Diseases of the Eye.

The extensive means furnished by the practice of the New-York Eye Infirmary for the observation of Diseases of the Eye, affords an ample opportunity to the surgeons attached to it, to test the correctness of the pathological and therapeutical views heretofore taken of that interesting class of diseases. I therefore feel it my duty, as one of those surgeons, to communicate to the public the results of such observations; and shall occasionally, as materials present themselves, offer such reflections on them as may occur to me. In these communications I shall adopt no particular order, but take up subjects rather as cases are brought before me, than in conformity to any definite plan. Nor do I wish it to be understood that I shall confine myself to original remarks, but shall avail myself of the labours of others, as far as they appear to me to have led to correct results.

The subject intended to be illustrated in the present paper, is *the operation for artificial pupil;* a subject which has extensively engaged the attention of the surgeons of Europe; an operation which has been performed in a greater variety of modes than any other within the compass of surgery.

The state of the organ rendering this operation necessary, is loss of vision caused by a morbid condition of the cornea or iris, or both, which has either destroyed the natural pupil, or rendered it useless; and where, therefore, the only mode of restoring sight, is to make a new pupil. The first cases which led to the performance of operations for this purpose, were unsuccessful operations for cataract by extraction, terminating in closure of the pupil. It was a case of this description in which Cheselden first operated with success; and this forms one of the instances most favourable, in general, to the success of this operation.

The states of the eye, requiring the formation of a new pupil, are extremely various, and as many different modes of operation have been devised for their relief, as there are different states of the organ requiring it. Guthrie,* who has written an excellent treatise on this subject, has enumerated no less than forty-six operations of this description; and has minutely described every variety of case in which the operation becomes necessary. This mode of considering the subject is, however, altogether too laboured and complex for the limits of this paper; and I shall confine myself, therefore, to a description of the principal states of the eye requiring an artificial pupil, with the appropriate operations for their relief.

The condition of the eye rendering the operation necessary, was stated to be, a morbid state of either the cornea or iris, or both of them. The disease, therefore, may be divided into the *simple*, when only one of these parts are in a morbid condition; *complicated*, when they are both affected,* or any other parts are involved in the disease.

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* Lectures on the operative surgery of the eye. 1823.

The simple includes two varieties;

1. A dense indelible opacity in the centre of the cornea, sufficient to prevent the light passing through the natural pupil; the eye being otherwise healthy.

2. The cornea sound; but the pupil closed or obliterated.

In this case, with certain exceptions, the capsule of the lens is also opaque, and the iris adhering to it; and therefore the only simple case is that in which the lens has been removed by extraction, or in some other manner destroyed.

The complicated states are more numerous;

1. The central opacity of the cornea may be complicated with adhesion of that part to the iris; this adhesion being in some cases partial, and including only a small portion of the border of the iris, in others, more considerable, and involving the whole, or nearly all of the pupillary margin.

2. The constricted or obliterated pupil may be conjoined with an adhesion of the iris to the opaque capsule of the lens; the lens itself being either opaque or transparent; either state indifferently as regards the operation.

3. This state may be combined with central opacity of the cornea; or with adhesion of the cornea to the iris.

4. The closure of the pupil may have been caused by a prolapsus of the iris, which has become permanent, and the whole or greater part of the pupillary margin involved in the cicatrix.

Before describing the different operations applicable to these conditions of the eye, we must advert to the circumstances which make it proper or improper to operate in any individual case. The principal point to be ascertained is, whether the organ is in a state fit for vision after the removal of the obstacle proposed to be removed by the operation: in other words, "whether the retina retains its sensibility, and the vitreous humour its texture and transparency." It is obvious that without these conditions, all operations must be useless. The condition of the organ in these respects depends very much upon the character and seat of the original disease, and a careful examination of the history of the case will essentially aid us in making up our opinion. The most favourable case is that in which the cornea alone is the seat of the disease; the iris and other textures of the eye being healthy. Of this character is a simple central opacity of the cornea. A closed pupil from prolapsus of the iris is another case equally favourable, for here the iris is only passively concerned in the disease, and is in a healthy condition. Next in order, among the favourable cases, are those produced by external wounds or external inflammation; even although the iris be partially injured. A fourth is closure of the pupil after extraction; while that following depression is more unfavourable, as the accompanying inflammation is generally more severe, and sufficient to have produced much mischief among the internal textures of the eye. The last in order, of the cases upon which it is proper to operate, is a simple closure of the pupil, following inflammation of the iris.

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* Mr. Travers

In judging of the state of the organ, we must examine the colour of the iris, and its general healthy condition. If these be natural, the case may generally be considered sufficiently favourable to warrant an operation. If, on the other hand, the iris have lost its natural colour, and this alteration involve the whole of its surface, the case is hopeless, and no operation should be attempted. If, however, merely the pupillary margin be discoloured, and the rest be natural, the case is not necessarily unfavourable.

We must remark also, whether the iris retain its natural position in the globe. After disorganizing internal inflammation, we see, in one case, this membrane protruding forward, touching the cornea, and obliterating the anterior chamber, or its surface elevated into tubercles; or on the other hand, sunken and filling up the posterior chamber. The same causes may produce other marks of general diseased changes in the eye, such as, permanent enlargement of the sclerotic vessels, and change of colour in that dense tunic; distention of the globe by hydrophthalmia; or a diminished size of the organ from a state of atrophy. All these circumstances, of course, render an operation useless, and therefore improper. Indeed, under the most favourable circumstances, these operations fail in a large proportion of cases; and we must, therefore, never flatter either ourselves, or our patients, with too much hope of success.

As a general rule, it is improper to operate if the patient have not some accurate perception of light; for there is no obstruction to vision, capable of being removed by operation, sufficient to prevent entirely the perception of light. Many of the cases, indeed, which present themselves, are so desperate, that we are willing to make any effort to restore the patient to sight. We therefore operate upon cases, in which the prospect of success is but faint; because our operation can do no permanent injury, and if it fail, leaves him in as good a situation as we found him. I have now a patient at the Infirmary, whose case will serve as an illustration. He lost his sight from wounds of the eye received by fragments of glass, shivered by the discharge of a cannon. One eye is completely destroyed. The other was extensively wounded, the cornea and iris diminished in size, and the external half of each, disorganized and useless, the corresponding half of the globe being soft, and the vitreous humour evidently in a dissolved state. The rest of the eye, however, opposite to a sound part of the cornea and iris, is firm and apparently healthy; and a sufficient space is left in which a new pupil may be made. Such a case is indeed sufficiently unfavourable; but I shall undertake the operation, not without some hope of success, because the injury done to the organ is the result of external violence, not internal inflammation.

A great obstacle to our success in many of these cases, is the disposition to inflammation remaining in the organ, in consequence of frequently repeated attacks of disease. In making up our prognosis, this also must be taken into the account, and if an operation be determined upon, the patient must be prepared for it with more than usual care. It is sufficiently remarkable, how much a healthy iris may be wounded, or even lacerated, without any serious inflammation following; but if these parts be in a previous state of chronic disease, we cannot expect so favourable a result.

No advantage can be derived from performing this operation upon one eye, when the other is sound and enjoys good vision. The most successful operation for artificial pupil gives a degree of vision by no means equal to that of a healthy eye; and when one eye is good, a less perfect fellow to it is of little use.

The *degree* of vision depends much upon the size and situation of the new pupil. In general we cannot make it too large; and the greatest difficulty is to make it sufficiently so. A disposition to contraction exists in most cases, which must be allowed for in making the new pupil.

The *situation* of the new pupil is of much importance, but cannot always be regulated, as the nature of the case generally allows us to make it in one situation alone. Where we have a choice, however. we must remember that a central pupil is not only the most natural, but the most useful that can be made; for opposite to it is the most sensible part of the retina. The next most eligible situation is on the inner side of the original pupil; next, a corresponding situation on the outer side; and last and worst, the upper half of the iris, which is almost, or entirely covered by the upper eyelid, in the ordinary state of the eye.

Previously to the performance of any operation for artificial pupil, we should always ascertain whether any improvement to vision may not be gained by the use of belladonna or stramonium. The dilatation of the constricted pupil to the size of a small pin's head, or even less, will often give the patient a degree of vision, which will render any operation unnecessary. This precaution should in no case be neglected; for we will frequently in this manner restore good sight when we least expect it. A very remarkable instance of this fact occurred in the following case.

Case I.—Steinberg was received March 12th, 1824, at the New-York Eye Infirmary, by my colleague, Dr. J. Kearny Rodgers; blind in consequence of closure of the pupils from inflammation of the iris. The constriction of the pupils appeared to be so complete, and the original inflammation so severe, that the patient was assured that he could expect no relief, except from an operation for artificial pupil, and that even in that case, success was extremely doubtful. It was evident that an operation was perfectly justifiable, if the smallest hope of success existed, for the degree of vision remaining to the patient was totally insufficient for any useful purpose. He could not discover the form of any object, and indeed could do little more than distinguish light from darkness. Before performing an operation, Dr. Rodgers took the precaution to order the application of extract of stramonium to the eyes. At the next visit the patient had gained a degree of vision, which made it evident that no operation would be necessary, and he was directed to continue the stramonium. Under this application, the sight regularly improved, until at length the patient could read without difficulty, type no larger than that of this journal. The most surprising circumstance attending this case is, that notwithstanding a slight enlargement of the pupils could be observed after the application of the stramonium, yet they were still so excessively small, that it was altogether unaccountable how the patient could see so accurately. The improvement in vision was permanent after the discontinuance of the stramonium; and this man now gains a comfortable subsistence by the occupation of comb-making, which he performs to the perfect satisfaction of his employer. The appearance of the pupils is shewn in the annexed drawing.*

The *preparation* of a patient for this operation by proper regimen is absolutely necessary, and should never be omitted. The operation should not be attempted before all trace of previous inflammation has subsided; but even then, an organ which has previously suffered from disease, is more liable to a return of inflammation, than a healthy one. The nature of the preparation depends upon each particular case. If some degree of congestion still remain in the eye, the patient should be repeatedly cupped, use purgative medicines, and have blisters drawn behind the ears, together with other treatment ordinarily employed for the purpose of subduing chronic inflammation. But if no such symptoms remain, low diet and complete abstinence from animal food for five or six days before the operation, together with the use of an occasional purgative, is all that is necessary.

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* See Plate Fig. 5 & 6.

Having now made all the preliminary observations which appear necessary, we shall proceed to the examination of the various operations proposed for the formation of an artificial pupil. There are a variety of different principles, upon which these operations have been founded. Each of these may be applicable to some particular case, and therefore, each should be understood; but the judgment of the surgeon must determine the one best adapted to the case under consideration at any given time. To assist this judgment, experience and observation may furnish some general rules.

There are three principal modes of performing this operation.

1. That of detaching the ciliary margin of the iris from the ciliary body; Coredialysis, or Iridodialysis, as it has been termed by authors.

2. A simple division of the fibres of the iris, in such a manner that their retraction may leave a pupil; Coretomia, or Iridotomia.

3. The removal of a portion of the iris, so as to leave an opening sufficient to answer the purpose of a pupil; Corectomia, or Iridectomia.

Each of these modes of operating has had its advocates, and unfortunately, the favourers of each have been too strennous in insisting upon its application to every variety of case. We shall discover by an examination of the different cases, that each may be made useful.

1. Of Coredialysis.

In dissecting an eye, it is found that the iris may be easily separated from its ciliary attachment without laceration. It had also been observed, that occasionally this separation had been produced by accident, from blows or other violence; and that in such cases, the old pupil has been obliterated, and the new one has afforded the patient very tolerable vision. It was naturally concluded that an operation which imitated this accident, would succeed in giving sight, when the pupil had been closed by previous disease; and accordingly, at about the same time, Scarpa and Schmidt invented and practised this operation. It seemed at first to succeed; but it was soon ascertained that after a time, the new pupil thus formed, gradually contracted until it became useless; and therefore this operation has been nearly abandoned. In a few cases, however, it is the only one capable of being made use of, and therefore, it is necessary to describe the mode of performing it. The most favourable situation to make a new pupil in this mode, is at the upper edge of the iris, for there the weight of this membrane counteracts its tendency to resume its original situation; but unfortunately, this is the worst place in which a pupil can be formed to give the patient good sight, in consequence of its being generally covered by the upper eye-lid, without opening the eye unusually wide.

The only case in which the operation is still considered preferable to others, is that in which the pupil is closed and firmly adherent to the opaque capsule and lens, and at the same time attached to a large central opacity of the cornea. In this case, a pupil made by separating the iris from the ciliary body, will be exterior to the opaque lens, and therefore, the difficulty avoided of removing that body from the eye. The case is rendered still more favourable for this purpose, by the fact, that the lens, in many of these cases, is partly absorbed and diminished in size, by the effects of the previous inflammation; and consequently, the space left at its edges, through which the light may pass to the retina by means of a pupil thus made, is rendered sufficiently ample. There are cases, however, in which this operation is not so eligible as another, even in this state of the parts. When the central opacity of the cornea is small, and sufficient sound iris and cornea are left in any situation for the purpose, the operation of Coretomia, next to be described, is most proper.

The methods adopted for performing the operation of separating the iris from the ciliary body are two; the one being effected by introducing an instrument through the sclerotic coat, the other, through the cornea.

The first is the operation invented by Scarpa, and is thus described by that author.*

"The patient is to be seated and secured as in the operation for extracting a cataract: then with a straight needle, such as I adopt, the sclerotica is pierced on the external angle of the eye, about two lines from the union of that membrane with the cornea. The point is next advanced as far as the upper and internal part of the border of the iris, on the side next the nose; in this situation, close to the ciliary ligament, the needle pierces the upper part of the internal margin of the iris, until its point is just visible in the anterior chamber of the aqueous humour. This step of the operation requires attention, because this part of the anterior chamber is very narrow, and if the point of the instrument advances ever so little before the iris, it must penetrate the substance of the cornea. As soon as the needle is visible in the anterior chamber, it must be pressed upon the iris from above, downwards, from the internal towards the external angle of the eye; as if it were intended to carry the instrument parallel to the anterior surface of the iris, in order that a portion of its border may be detached from the ciliary ligament. The point of the needle must then be depressed, in order to press it upon the inferior angle of the rent, which may be enlarged at pleasure, by drawing the iris towards the temple, and directing the instrument from before backwards, in a direction parallel to the anterior surface of that membrane, and the greater axis of the eye.

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* Treatise on the principal Diseases of the Eyes, 1801.

" Having produced this separation, if no opaque body appear in the bottom of the eye, the needle may be withdrawn. If, however, any portion of opaque capsule, which had remained after the depression or extraction of a cataract, should appear near the pupil, this opaque portion being broken down with the point of the needle, must be conveyed through the artificial pupil, and deposited in the anterior chamber of the aqueous humour; or, as we have before shown, these membranous flakes may be left to be gradually dissolved and absorbed along with the aqueous humour which is incessantly replenished."

Schmidt performed this operation somewhat differently, although he aimed at producing the same effect. In certain cases, he introduced a curved needle through the cornea into the anterior chamber; and advancing its point to the inner edge of the iris, fixed it in that membrane, and then, by at the same moment withdrawing the instrument and carrying back its point, endeavoured to detach the iris from its ciliary connexion.

But both this and Scarpa's operation, have more recently been superseded by another invented by Reisinger, which I have never had an opportuuity of performing, from the want of the proper instruments, and the difficulty of procuring them in this country. Beer is said, however, to have tried Reisinger's operation very extensively and with great success.

Reisinger's operation consists in separating the iris from the ciliary body, and strangulating it afterwards between the edges of the cornea; to effect which, he uses a very fine double hook, which by a slight pressure of the finger and thumb, is made to resemble a single one.*

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* See Plate Fig. 9.

An incision is first made in the cornea near its outer edge, one and a half, or at most two lines in length, and if possible, three lines (one quarter of an inch) distant from that part of the iris which is to be separated.

" After the incision in the cornea is completed, the eye should be allowed to close for a moment to afford it rest, and prepare it for the subsequent proceedings, unless it has been previously fixed by an instrument.

" The operator should hold the hooked forceps nearly in the same manner as the cataract knife, the points of the hooks downwards, the thumb resting on the flat side of the shank which is facing the operator, and the first and second finger on the flat side of the opposite shank, so that the point of the second middle finger may reach the end of it. The handle must rest against the *radial* side of the first joint of the first finger; the little finger serving to steady the hand.

" The instrument is now drawn along the edge of the cornea, pressing gently and steadily with the convexity of the united hooks against the small incision, in order that the edges of the wound may be gently opened, and the closed forceps insinuated into the anterior chamber; then glide the instrument with the convexity of the hooks against the inner surface of the cornea, as far as the spot where the iris is to be separated; taking care, however, to bring the hooks as near as possible to the ciliary edge of the iris. The forceps are now to be turned, so that the point of the hooks may be directed towards the iris; then let the instrument be opened, so that the two hooks may be at least one line, and not more than two lines asunder; press the convexity of the hooks against the ciliary ligament, sink the points into the iris, and close the forceps, at the same time gently drawing them towards you; by these motions, which must be almost simultaneous, the iris is steadily seized and easily separated. The closed forceps are now to be further drawn out of the eye, the convex edge of the hooks being carefully turned towards the inner surface of the cornea to avoid pricking it. In this manner a considerable part of the iris will be separated, and a triangular pupil formed, of the size of at least one quarter of the iris, and which will reach the middle of the eye.

"The handle of the forceps is now to be depressed, and as the convexity of the hooks glides out at the upper angle of the incision, withdraw the forceps, together with that part of the iris which has been laid hold of, so as to produce a pretty considerable procidentia iridis. The eye should now be immediately closed to assist the strangulation of the prolapsed iris, by the pressure of the eyelid.

"If the prolapsed portion of the iris should recede, it will generally happen from the incision having been made too large. In this case, it may probably be advisable to cut off the part of the iris which has been separated, and which must again be drawn out; and so combine Coredialysis with Coretomia, to insure an artificial pupil of a proper size.*"

2. Of Coretomia.

A simple division of the fibres of the iris, in such a manner as that their retraction shall leave an opening sufficient for a pupil.

This operation is essentially that originally proposed by Cheselden, but in consequence of its improper application to cases to which it was not adapted, it was for many years abandoned; and is even now little employed in Europe by any other surgeon than Sir William Adams, who successfully revived it a few years since.† In a large proportion of cases it is certainly the best that can be adopted, both for the facility with which it can be performed, and the success of its results. The cases which will be related in the sequel are the best illustrations of the truth of this observation. In all the cases to which it is applicable, the only choice is between this and Coretomia. In this last operation, the cornea is necessarily divided, the aqueous humour escapes, and after this has happened, the incisions are to be made in the iris. The actual performance of one such operation will prove to a surgeon how much more difficult it is than it may appear before hand. Although the exact situation in which he intends to divide the iris be perfectly visible before the section of the cornea, yet the moment that membrane is wounded, and the escape of the aqueous humour allows it to become flaccid, all distinctness of parts is gone. The cornea is no longer transparent, and the part of the iris intended to be cut cannot be seen. If, again, more than one incision is necessary in the iris, the obscurity is still farther increased by the effusion of blood from the first. The pain too, inflicted upon the patient is much more severe, and the danger of subsequent inflammation greater. In Coretomia, however, these difficulties do not occur. The aqueous humour is not evacuated, and the cornea remains perfectly full and transparent until the operation is finished, giving the surgeon a clear and entire view of the parts upon which he is operating. I have now very repeatedly performed the operation in both modes, and have no hesitation in decidedly preferring that of Coretomia in every case in which it can be employed.

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* Reisinger, in his description of this operation, part of which I have quoted, gives many more minute directions concerning it. I have extracted sufficient to show the nature of the operation, and to do more would unreasonably lengthen this paper. For the same reason I omit describing another mode of performing a similar operation, invented by Langenbeck, and much approved of by Guthrie.

† Practical Observations on Diseases of the Eye. 1814.

The cases to which this operation is most applicable, are,

1. That in which the pupil has been closed by the supervention of inflammation after the operation of extraction, or depression of the cataract, or its removal by the absorbent practice, and where, consequently, the lens is no longer situated behind the iris; the capsule being in some cases left, in others removed along with the lens; the cornea remaining transparent, and the anterior chamber preserving its original dimensions, or nearly so.

2. A less favourable case, but one to which this operation is, notwithstanding, more applicable than any other, is that in which the pupil has been closed by inflammation, the lens and capsule remaining; the lens opaque or transparent, indifferently.

3. A third condition of the eye, admitting of this operation, is a closure of the pupil by prolapsus of the iris; the whole or greater part of the pupil being involved in the cicatrix.

4. Central opacity of the cornea complicated with adhesion of the cornea to the iris; the adhesion including the whole of the pupil, but the central opacity not very extensive, and a considerable space left in some situation between it and the edge of the membrane. This case is still more favourable to the success of this operation, if the lens have been previously removed, or is softened in its texture, or contracted in size.

As Sir William Adams is the author of this operation in its present improved form, I will describe it in his own words.

" The patient being seated, as in the operation for cataract, and the eye being steadied, either by the finger of the assistant who supports the upper lid, or by gentle pressure made with my concave speculum, the iris scalpel* already described, with its edge turned backwards, must be introduced through the coats of the eye, at their external part, about a line behind the iris, and in the transverse diameter of the latter membrane. The point of the instrument should then be made to penetrate through the iris, into the anterior chamber, in a line with its central diameter, and somewhat less than one-third of the width of that membrane, from its ciliary margin. The iris scalpel is then to be carried cautiously through the anterior chamber, towards the inner canthus, keeping its edge in contact with the iris, (in order to prevent the point from piercing the internal part of the cornea,) until it has traversed more than two-thirds of the width of the iris, when it should, with great care, be drawn backwards, almost out of the eye, making the most delicate pressure with the edge of the instrument, against the iris, lest it should be detached from the ciliary ligament. If the division of the iris be not effected to a sufficient extent, during the first effort, the iris scalpel should be again carried forward, and withdrawn in a similar manner.

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* See Plate Fig. 10.

"This is to be repeated as often as may be necessary to effect a division of the iris, to the extent of a third part of its diameter. In my work published in 1812, I directed that two-thirds at least, of the extent of the transverse diameter of the iris, should be divided, in order to guard against the supposed disposition in that membrane, to re-unite; but abundant experience of the favourable results of this operation, which have since occurred in my practice, has convinced me, that no such apprehension need be entertained, and that a division of one-third the extent of the diameter of the iris is sufficient. Indeed, so far is there from being a disposition in the newly-formed pupil to close again after it has been once established, that the very reverse is the case; for the radiated fibres subsequently contract in a greater degree, from delay; whereby the artificial pupil is proportionably enlarged.* In the species of case now under consideration, an almost immediate contraction of the radiated fibres of the iris, usually takes place, after that membrane has been divided, which produces a new pupil, of a sufficient size, for all the purposes of vision."

The most difficult part of this operation is the division of the iris, which it is impossible to effect without an instrument possessing the keenest edge. To obtain a good iris knife, in this country, is no easy matter, and this difficulty presents the greatest obstacle to this mode of operating.

This operation is most easily performed in cases where no lens nor capsule remains; as after extraction or depression of cataract, the first of this class; and to these cases it is appropriate without any modification.

In the second case, closure of the pupil with adherent capsule and lens, the operation is rendered more complicated and difficult. Here we have not only a new pupil to make, but to remove the lens and capsule; for even if the lens be transparent, it is necessarily wounded in the operation, and consequently becomes opaque. In such cases, the lens is fortunately, in most instances soft and easily divided. The operation is then to be begun and continued as has been already described, until the iris is about to be divided; when we must endeavour to make the opening larger than in the other case, as it is more likely to close at its angles. At the same time the lens must be cut into, and divided, as much as possible, into fragments, which must be brought into the anterior chamber. This cannot, however, be entirely effected at the first operation; but the principal object then to be attained, is to make the new pupil. A second operation is generally necessary, in order to effect the removal of the lens and capsule; which may be done with the needle, as in soft cataract, in the mode now usually adopted. If, however, the pupil have not been made sufficiently large at the first operation, the iris knife must be used in the second, in order to complete this object, as well as remove the remaining portions of the lens.

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* Repeated observation enables one to vouch for the correctness of this remark of Sir W. Adams.

If we have any reason to suspect, in such a case as we are now considering, a hard lens, so hard as not to admit of division in the manner described; then this operation is not applicable, and the case must be attempted by Corectomia.

3. The third case enumerated as requiring Coretomia, consists in the one last described, complicated with adhesion of the iris to a central opacity of the cornea; the opacity not considerable in extent. There is, in these cases, even if the lens remain, often space enough between its edge and the ciliary body, for a pupil in that situation to be useful: and as in many of these cases, the lens is reduced in size, in others absorbed, as when it occurs from accident in which the lens is wounded, still more room is obtained for the passage of light through the new pupil.

The operation is then to be performed exactly as in the first case, except that, instead of the incision being made across the centre of the iris, it must be effected opposite to the most transparent part of the cornea, and of sufficient extent for the purpose in view.

4. In the last case, *closed pupil from prolapsus of the iris,* we have generally an opportunity of making the new pupil in the centre. The plan of operation is the same as in the first case, and as the fibres of the iris are here on the stretch, they may be divided more easily than in any other instance. Under these circumstances, the lens being necessarily wounded, must at the same time be depressed; or if sufficiently soft, divided into fragments, and brought forward into the anterior chamber. If a second operation be necessary to complete this object, the remains of the lens may be either extracted through a small opening in the cornea, or still farther broken up by the needle.

Another mode of effecting the operation of Coretomia, is by means of the scissors instead of the knife; an operation invented by Professor Maunoir, and adopted by Scarpa. The scissors are made so small and delicate, as to be easily introduced through an incision in the cornea, with their blades forming a large angle with the handles.* The upper blade, or that which is intended to pass through the anterior chamber between the cornea and iris, terminates in a small button. The lower one, with which the iris is to be pierced, has a very sharp lancet point. The operation is thus described by Scarpa.

"An incision is made in the cornea at its lower or lateral segment, as may be most convenient, of *half the extent* of that which is usually made for the extraction of the crystalline lens. Through this small opening in the cornea, the scissors are to be introduced closed, with the flat part in a line parallel to the transverse diameter of the iris; and as soon as the point of the instrument has advanced near to the great margin of the iris, that is to say, nearly opposite the small incision made in the cornea, it is gently opened and inclined in such a manner that the inferior pointed blade may perforate the iris, and run along the posterior surface of that membrane, until the small button of the upper blade reach the part where the cornea and sclerotica unite. The iris is then to be divided in its transverse diameter, by a single stroke passing as nearly as possible through its centre. This incision being executed, another is to be expeditiously made, so far diverging from the first, that the two incisions may form in the centre of the iris a triangular flap of the figure of the letter V, the apex being precisely in the centre of the iris, and the base near its greater margin.—On opening the eye operated on, five or six days after, the apex of the triangular shred is found to have retracted towards its base, leaving in the middle of the iris an artificial pupil of the form of a parallelogram."

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* A delineation of this instrument is given in S. Cooper's First Lines of the Practice of Surgery.

By means of the scissors, also, an operation may be effected, according to Scarpa, without injury to the transparent lens or its capsule, in the case of a "contraction of the natural pupil occasioned by the iris and pupil being stretched towards some point in the cornea. This happens, in general, in consequence of prolapsus of the iris through ulcers of the cornea." In this case, the lens and capsule often preserve their transparency, and the cornea is only opaque immediately around the adhering point.

For this operation, it is necessary to have the scissors of Maunoir made with the points of each blade terminating in a button. Then the operation having been commenced as in the first instance, "one of the blades, by means of the small button, is introduced within the contracted natural pupil, and conducted behind the posterior surface of the iris, until the other blade, defended in the same manner, has reached the confines of the cornea and sclerotica. The iris is then to be divided in the form of the letter V, without at all injuring either the capsule or the lens, both of which have preserved their transparency."

How far this operation is practicable without injury to the lens or capsule, I cannot say, as I have never performed it; but I confess, I somewhat doubt the possibility of carrying an instrument between the iris and capsule, without lacerating the latter membrane. If practicable, the operation is certainly very beautiful.

If a hard lens be supposed to be present, Maunoir operates with his scissors in a manner similar to the first case, but divides, with one stroke of the instrument, the iris, capsule and lens, which is afterwards extracted through the incision in the cornea, either by means of a forceps or scoop, or simply by slight pressure on the eyeball.

3. Of Corectomia.

The third mode of performing the operation for artificial pupil, differs materially from either of the others, and consists in removing a portion of the iris, so as to leave an opening in it, sufficiently large for a pupil. This operation was invented by Wenzel, and was adopted in consequence of the disposition to contraction, supposed to exist in a simple division of the fibres of the iris. In the proper cases, this disposition, it is now ascertained, forms no obstacle to the success of the latter operation, but in certain other cases, Corectomia is the best that can be chosen. The state of the organ to which it is adapted, are,

1. A central opacity of the cornea, eclipsing the pupil; the iris, capsule and lens sound, and sufficient transparent cornea, in some part of its edge, to admit of a new pupil.

2. A sufficient portion of the cornea being transparent, but the pupil constricted and adherent to the capsule and lens; this last part remaining of its full size, and supposed to be hard.

For the first of these cases, Mr. Gibson has invented a very ingenious operation, described in his excellent work on artificial pupil.* The author's description of the operation is as follows:

" The most favourable situation for the transparent part, (so far as the facility of the operation is concerned,) is towards the outer angle of the eye, or towards the lowest part of the cornea.

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* Practical Observations on Artificial Pupil. 1811.

"In describing" the operation, "I shall select a case, in which the transparent part of the cornea is situated towards the outer angle of the eye. I shall suppose, also, that its extent is one-third of the diameter of the cornea: although an opacity, leaving a much larger transparent surface, will destroy what may be termed useful vision.

"The first step of the operation is to secure the eyelids, as in the operation for extracting a cataract. A puncture is then to be made in the cornea, within a line of the sclerotica, to the extent of about three lines. All pressure is now to be removed from the eyeball, and the cornea knife gently withdrawn. The consequence of this is, that a portion of the aqueous humour escapes, and the iris falls into contact with the opening in the cornea, and closes it like a valve. A slight pressure must now be made upon the superior and nasal part of the eyeball, with the fore and middle finger of the left hand, till at length by an occasional and gentle increase of the pressure, or by varying its direction, the iris gradually protrudes, so as to present a bag of the size of a large pin's head. This protruded portion must be cut off with a pair of fine curved scissors, and all pressure at the same time removed: the iris will then recede within the eye, and the portion which has been removed, will leave an artificial pupil, more or less circular.

"The principal points to be attended to, in this operation, are, to enter the cornea knife at a proper distance from the sclerotic coat; not to make the puncture too large; and to snip off the whole of the protruding bag at once, and as soon as can be effected. For, immediately, when an opening is made in the bag with the scissors, the aqueous humour escapes, the iris retires within the eye, and cannot be again protruded by the same means, because the expulsion of that membrane depended upon its being in an entire state. If this occurrence should take place, and the artificial opening should not be large enough to form a serviceable pupil, the iris may be again drawn out of the eye, by means of a small hook."

It should be considered a principal object, in this operation, to remove the margin of the original pupil, so that the old and new one may be formed into one. If this be not effected by the first excision of the iris by the scissors, the margin should be drawn out by the small hook, and then cut off as before directed.

The most beautiful part of this excellent operation, is the preservation of the capsule and lens free from injury, an object which can hardly be attained by any other mode of operating.

In this condition of the eye, the operation of Coretomia may also be made use of, but necessarily sacrifices the lens, and therefore, is inferior to Mr. Gibson's method. It differs from that already described as Sir William Adams' operation, only in dividing a portion of the iris on one side of the pupil, and carrying the incision into that opening, instead of making it involve a central portion of the membrane.

2. The second case, requiring the operation of Corectomia, was stated to be, a constricted pupil, adhering to a capsule containing a hard lens. In this case, Corectomia is not applicable, from the difficulty of dividing the lens, when in such a state.

The proper mode of operating under these circumstances, is, to excise a central portion of the cornea and extract the lens. For this purpose, a section of the cornea must first be made, as for extracting the cataract; the operator then lays hold of the constricted centre of the iris with a pair of fine forceps, and raising it gently, cuts it away with a flat curved scissors, removing as large a piece of the iris, as will leave a sufficient pupil. The lens may be afterwards readily extracted through the new pupil.

Wenzel, who invented the operation of Corectomia, performed it somewhat differently. He made his incision into the iris, with the cornea knife, in its passage across the eye, in making the first incision. A triangular or crescentic flap of the iris was thus made, which was afterwards removed by the scissors, leaving a central pupil. This mode of operating will succeed very well in appropriate cases, but is not performed with as much facility as the last.

I have now described the different operations for artificial pupil, and the various states of the eye to which each is applicable. It will be useful to recapitulate these states, and the modes of operation appropriate to them.

1. Central opacity of the cornea, the eye otherwise sound.

Operation. Corectomia; Mr. Gibson's method. Or in-instead of this, Coretomia, by dividing the edge of the iris with an iris knife.

2. Cornea sound, but the pupil closed; the lens having been previously removed.

Operation, Coretomia; Sir W. Adams' method.

3. Central opacity of the cornea, with adhesion of the cornea to the iris, and of this to the capsule of the lens.

Operation. If the opacity be large, Coredialysis; if it be small, Coretomia.

4. Cornea sound, or sufficiently transparent at or near its centre; but the pupil closed and adherent to the capsule and lens.

Operation. If the lens be soft, Coretomia; if it be hard, Corectomia.

5. Pupil closed by prolapsus of the iris, and that membrane stretched towards the adherent point.

Operation. Coretomia.

There is one condition of the eye, in which vision is lost by closure of the pupil, in which we are told by Mr. Guthrie, that it may be restored to a considerable perfection, without resorting to any operation for the formation of a new pupil. It is a case, in which the pupil has been nearly closed by inflammation, but where its diameter is " not less than one line, in some instances more; and although the edge of the iris is adherent, so as to render it immoveable; still, the lymph deposited behind it seems to be laid upon the capsule of the lens, rather than to form one part with it: the iris itself, even in its smaller ring, is hardly, if at all discoloured; or a slightly greenish tinge may be discovered in one which is naturally blue, and a deeper tinge of colour in one that is naturally brown.

"In such cases, the motion of the iris appears only to be prevented, in consequence of its attachment; and the object of an operation seems to be, the freeing of the attachment, and the removal of the opaque parts. This may be accomplished by the introduction of a needle behind the iris, so as to separate it from its attachment; and subsequently to open into the texture of the lens; for, as the passage of the needle behind the iris necessarily renders the lens opaque, if it be transparent, its removal becomes necessary to vision. In this operation, the iris need not be divided, except at any part where it may be too firmly attached to be separated, and the belladonna must be applied immediately after the operation, to dilate the pupil, and separate it more permanently from the parts behind, in which state of dilatation it must be retained, until the lens is dissolved.

"In some cases, the iris, although separated, will still be immoveable, from the cohesion of its fibres one to another, from the effusion of coagulable lymph in its posterior part, although this may not be strongly indicated by a change of colour. If after the iris be detached, the pupil is likely to be too small, the point of the needle must be advanced through the pupil, and the inner edge of the iris divided as far as may be necessary, to insure a pupil of a proper size. In some instances, the operation may require repetition to effect the removal of the lens."

The number of cases, to which this mode of operating is applicable, must be extremely small; and Mr. Guthrie does not allude to any, in which it has been successfully performed. In general, where sufficient inflammation has existed to close the pupil, the posterior surface of the iris is loaded with lymph, and its fibres immoveable. Still, a few cases may occur, in which the operation may be well worthy of trial, and therefore, I have extracted the author's account of it from his work. I shall make use of the first fair opportunity which occurs, for the experiment.

After treatment. Much depends, in the success of operations for artificial pupil, upon the management of the patient after the operation. Several of the textures of the eye, more or less prone to inflammation, have been wounded, and that in an organ which has already suffered from disease. Every means, therefore, calculated to prevent inflammation, or subdue it, if it come on, must be made use of. The eye should be covered with nothing but a light compress of linen, which may be kept constantly wet with cold water. The patient should be put to bed, immediately after the operation, in a chamber from which the light is sufficiently excluded to make him comfortable. If any pain should come on, after that induced by the operation has subsided, he should be immediately and copiously bled; and to provide for this emergency, an assistant should be at hand during the night after the operation. The bleeding must afterwards be repeated, or cupping, or leeches, substituted, according to the degree of inflammation. A purgative should have been given the day before the operation, and another should be exhibited on that following it. No reason exists why the eye should not be examined on the day after the operation, and it is essential to do so, to ascertain the condition of the organ. Inflammation sufficient to defeat the operation, may have come on within the first 48 hours, without sufficient pain for the patient to make much complaint. On the other hand, little inconvenience will be felt from examining the eye, if it have not been bandaged up, and the chamber been unnecessarily darkened. This observation is equally true after the operation for cataract, as after that for artificial pupil. We derive also another advantage from keeping the patient in such a quantity of light, as he finds not disagreeable to him; that no undue irritability of the eye remains, when he first begins to use it; and he is enabled to do so many weeks sooner, than if he had been shut up in a perfectly dark room, after the operation. In addition to the remedies already mentioned, the antiphlogistic regimen generally must be rigidly pursued, as long as any tendency to inflammation remain in the eye. If none have taken place, in about a week, the patient may leave his room, and screen the eye with a common shade, gradually accustoming it to light as it gains strength.

I shall now proceed to relate a few cases, in which I have performed operations for artificial pupil, to illustrate the remarks made in the preceding paper. The two first cases are interesting, not so much for the advantage derived from the operations by the patients, as from the light they throw upon an important question in such cases. In performing such operations, we are accustomed to consider very long continued blindness as one of the circumstances most unfavourable to success. It is generally supposed that the retina, when deprived of its ordinary stimulus of light, for a great length of time, will entirely lose its power, and that if we succeed in removing the causes which prevent the light passing to the bottom of the eye, the patient will still remain blind. The following cases, in one of which, after the lapse of sixty, and in the other, forty years, the retina was still found capable of performing its functions, are striking proofs of how much may be done in the relief of blindness, even under such unfavourable circumstances.

Case II. In the month of November 1821, Mr. R. Wortendyke, aged sixty three years, a farmer from Sussex county, New Jersey, applied to me, blind of both eyes. When he was three years of age, he received a wound in the right eye from a fork, which penetrated the cornea near its lower margin, pierced the iris and wounded the crystalline lens. The consequence was, opacity and subsequent absorption of the lens, and adhesion of the iris to the lower edge of the cornea. In this situation I first saw the eye, sixty years after the accident happened. The pupil was extremely small, and drawn down to the edge of the cornea; but adhering only at this point, and free at its upper edge. The lens had disappeared, and the capsule remained behind the pupil, much thickened and opaque. The patient could see light with this eye, but was totally unable to distinguish objects.

The left eye became blind from an injury of much later date. At the age of fifty-nine, four years previously to my seeing him, Mr. Wortendyke received a severe blow upon this eye, from an ear of wheat. In consequence, violent inflammation, sloughing of the cornea, protrusion of the iris, and total destruction of vision took place. The eye recovered from all the acute symptoms, but the greater part of the cornea remained densely opaque, and the iris partially adherent to it.

The patient applied to me with the expectation of having some operation performed upon this eye, as he had long since given up all hope of receiving any benefit to the other. The right eye, however, was evidently in the best situation for successful operation, and the only unfavourable circumstance about it was, the great length of time which it had remained blind. I determined, however, to make an attempt upon this eye, although it was not without difficulty that the patient could be induced to consent to it; so impossible did he consider it, that any operation upon it should succeed.

The operations which it required were sufficiently simple. It was first necessary to remove the opaque capsule. This was effected without difficulty by the means of Saunders' needle. When the eye had recovered from this operation, the patient had some degree of vision, but the pupil was so small and distant from the centre of the cornea, that the sight was extremely imperfect. It was necessary therefore, to perform some operation for artificial pupil. For this purpose, Sir W. Adams' iris knife was introduced, about two lines behind the cornea, and after puncturing the coats of the eye, its point was pushed through the iris into the anterior chamber, about two lines from its ciliary margin: the point of the instrument was then directed towards the small pupil already described, and all that part of the iris was divided, which lay between this pupil and the point where the instrument was introduced. The iris immediately retracted, and left a large oval pupil, with its transverse axis running obliquely across the eye. The patient recovered, with very little supervening inflammation, and the pupil remained full as large as the natural one. By degrees he gained so much sight, that he was enabled to distinguish the countenances of his friends, and attend to his usual avocations on his farm. When I last saw him, he had still farther improved; but although his sight was sufficiently good for all ordinary purposes, he was unable to read. The success of the operation, however, was fully as great as could have been expected, under the circumstances. The appearance of the pupil is shewn, before and after the operation, in the accompanying plate, fig. 1 and 2.

In this case, although the eye operated upon had been blind so great a length of time, the other had continued good until within a few years; and the use of the one eye, might be supposed to have prevented the loss of function in the other. But in the following case, where the blindness was complete in both eyes, although the operation was not equally successful, another proof is afforded, of the propriety of attempting operations upon eyes which have been blind a great number of years.

Case III. Martha Hanson, aged forty-four years, was admitted into the New-York Eye Infirmary, March 6th, 1822.

When four years of age, she was attacked with violent inflammation of the eyes, which closed both pupils and rendered her totally blind. When she applied at the Infirmary, she could merely perceive a little light with the right eye; and having become blind at so early a period, she was entirely destitute of any ideas which could have been communicated by the sense of vision. In this respect, she was in the situation of a person born blind. The pupils, as was stated, were both closed, and filled with lymph, but the iris otherwise apparently healthy in each eye, and the cornea sound.

The operation was performed in the following manner:

A section of the cornea was made, as for extraction of cataract. The central adherent portion of the iris was then raised by the forceps, and cut off by means of a curved scissors. Under this was found a dense layer of lymph, adhering firmly to the capsule of the lens, and about a line in thickness. This, together with the capsule, was also removed by means of Gibson's iris forceps. The lens then appeared, opaque and hard, and was extracted without difficuly. A large round central pupil was left, perfectly clear and brilliant. Upon passing the hand before the eye, the patient immediately exclaimed, that she saw something moving; and we were satisfied that the retina had not entirely lost its functions by disease.

Considerable inflammation followed an operation of so much severity; but by the persevering use of general and local blood-letting, with the rest of the antiphlogistic regimen, this was eventually subdued. The greatest difficulty occurred, in enabling the eye, so long unaccustomed to light, to bear its admission; but, by degrees, this also was effected.

The first experiment, to ascertain the extent of her vision, was made by the matron, who standing at her side and holding a mirror before her, asked her if she saw her face; explaining at the same time the effect of the glass. She instantly cried out, and apparently with much alarm, that she saw herself double, mistaking the image of the matron's face in the glass, for her own.

Her sight now improved from day to day, and she was gradually taught to know and distinguish a number of objects. She learned to distinguish circular from angular bodies, several of the more striking colours, and some of the most familiar objects about her apartment. She seemed to have no idea of distance; and when told to touch an object, although she would direct her hand to it correctly, she could not judge how far it was from her.

For six weeks the sight continued improving, and she was daily acquiring knowledge through the medium of this new sense; but at the end of this period, she began to complain of her sight becoming more obscure; and on examining the eye, a small portion of lymph was seen on the lower margin of the new pupil, with extremely fine bands of lymph running thence to the upper margin. These increased daily, and as they increased, the pupil became more contracted, until it was entirely closed, and the patient was reduced to her former state of perfect blindness.

Case IV. Peter Simpson, aged forty-two years, in the month of July 1822, received a slight blow, from a hook attached to a pulley, upon the right eye, which caused immediate blindness. He had lost the left eye several years before. In consequence of the last accident, he became a patient of the New-York Hospital, whence he was discharged, after the expiration of two months, having recovered sufficient vision only, to distinguish light from darkness. During this period he had suffered severely from the violent inflammation which followed the accident.

In September 1823, he was admitted a patient into the New-York Eye Infirmary, with his eye in the following condition. In consequence, apparently, of a rupture of the cornea, from the blow he had received, the iris had prolapsed, was drawn over to the inner side of the eye, and adhered to that edge of the cornea, totally obliterating the natural pupil; but leaving an open space through the iris, at the inner edge of the cornea, which would have been sufficient for good vision, if that membrane had been transparent. Unfortunately, however, the injury had so far rendered this part opaque, as nearly to make the pupil useless, and it was still farther impaired by the presence of an opaque lens behind it. In consequence, the patient's vision was totally insufficient to enable him to gain a livelihood, although he could, without much difficulty, find his way in the streets. From this inability to work, he had for the previous year, been a tenant at the Alms-House. From this description, it will be evident, that the fibres of the iris were on the stretch, drawn towards the inner canthus, and also upwards and downwards, by their adhesion to corresponding points of the cornea. The case was, therefore, evidently favourable for the operation of simply dividing the fibres of the membrane; and as the cornea was transparent in its centre, the most advantageous situation was afforded for a new pupil.

Accordingly, the operation was performed upon that principle. The iris knife of Sir W. Adams was introduced through the sclerotic, at the usual situation for the introduction of the couching needle, the back of the knife being held towards the operator. When its point had arrived about two lines from the external edge of the iris, it was pushed forward through the membrane, and then carried on in the anterior chamber, as far as possible, towards the inner canthus of the eye. The iris was next divided by a back stroke of the instrument, in the motion of withdrawing it; the fibres immediately retracted, and left a large pupil, of a triangular form, opposite to the centre of the cornea.*

It was now discovered, through the new pupil, that the lens had been partially dislocated by the accident, and thrown towards the inner canthus of the eye, remaining attached opposite to the junction of the cornea and sclerotic; but its external edge projecting so far behind the new pupil, as to render it useless. It was, however, deemed most prudent to defer the operation for its removal to another time.

Little inflammation followed the operation; and in a fortnight, the patient was able to bear the full light with no other screen than a common shade.

In the month of November following, another operation was performed, for the removal of the opaque lens. A puncture was made through the cornea, near its inner inferior margin, and a section made, corresponding to about one-fourth its circumference. The lens, already softened in texture, and somewhat reduced in size by its exposure to the aqueous humour, immediately glided through the opening, and left the new pupil perfectly clear and bright. This slight operation was immediately recovered from, without any untoward accident. After the expiration of a few weeks, the patient returned to his occupation as a sawyer, and has ever since gained his own subsistence by his daily labour. He can now see so well without glasses, as to pick a pin from the floor. Having never learned to read, the accuracy of his sight cannot be tested in that particular; but he can distinguish the difference of small letters, and trace them accurately.

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* See Plate, Fig. 4.

Case V. John M'Gilvra, aged thirty years, from Schenectady county, was received into the Infirmary, October 27th, 1824. The right eye was completely blind from organic amaurosis, and had been in that situation about six years. The left had been deprived of vision, by an accident which had happened sixteen years before. The eye had been wounded by a thorn, which had torn the cornea entirely across, in its transverse diameter, wounding at the same time the iris and capsule of the lens. In consequence, when these wounds healed, the pupil was closed, and the cornea, iris, and capsule united in one firm cicatrix. The upper and lower portions of the cornea were perfectly transparent, and the iris apparently sound. These appearances are more fully shown by the annexed drawing.* The patient was deprived of all useful vision, and could only perceive the motion of objects before him, or their interposition between him and the light.

Three operations had been performed upon the left eye, by an eminent surgeon in the northern part of the state, the exact nature of which I could not learn; but they had the effect, as was afterwards proved, of destroying the lens, and thus rendering the subsequent operation less complicated.†

In this case, it was evident, that a very favourable situation was offered for a new pupil, in the lower half of the iris. The fibres of this membrane, being adherent at opposite points, viz. at its ciliary margin below, and to the firm cicatrix above, it might fairly be calculated, that upon a simple incision, they would retract sufficiently to leave a good and permanent pupil. Accordingly, on the 1st November, the operation was performed, in a manner similar to that described in the last case. The iris knife was introduced through the sclerotic, somewhat below the transverse diameter of the eye, its point pushed through the iris about a line from its ciliary junction, and after carrying it forward to a corresponding point on the opposite side, the membrane was divided by a gentle back stroke of the instrument, as it was withdrawn. The fibres of the iris immediately retracted, and left a large pupil, such as is shown by the drawing.*

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* See Plate, Fig. 7

† It is perhaps a matter of doubt, whether the removal of the lens was the effect of absorption, excited by these operations, or by the original injury; either being competent to this effect.

The patient soon recovered from the operation, but although his sight was somewhat improved, it was still insufficient to answer any useful purpose. On very close examination, after the organ could bear exposure to a full light, I perceived some minute portions of the capsule of the lens, which obstructed the passage of the light through the new pupil. On the 20th November, these were removed by a second operation, so simple as not to require description. Still, the degree of vision gained was not very material, for several days after the eye could bear full exposure to light; and I had almost despaired of eventual success in the case. About two weeks after the last operation, however, the sight suddenly began to improve, and gained so rapidly in the course of the following fortnight, that with proper glasses the patient could read with facility the title page of a book. The long disuse of the organ, in this case, seemed at first to have rendered it incapable of performing its functions, after the obstacles to vision had been removed; but, by degrees, it regained its powers. The patient was discharged from the Infirmary early in December.

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* See Plate, Fig. 8.

In March following, four months after the last operation. I received from him the following letter.

Princetown, March 4th, 1825.

Dear Friend,

With much pleasure I inform you that my eyesight has gained so, that I can see to read small print; as small as that of a pocket bible. My health is good, and I hope you enjoy the same blessing. I return you my humble thanks for your kind attention to me.

Yours with respect,
John M'Gilvra.

Dr. Delafield.

The success experienced in this case, was certainly more than I expected. It was not the first instance, in which I learned not to despair of eventual success, when sight was not immediately recovered, after operations on the eye. A more striking one occurred in the case of a young lady. upon whom I operated for cataract, about eighteen months since.

The cataract, which proved to be soft, was removed by lacerating the capsule, loosening the texture of the lens, and placing a portion of it in the anterior chamber. In two months after the operation, the whole of the lens and capsule were absorbed, and the pupil perfectly clear and bright; but the eye was useless, and the patient could distinguish the form of no object with it. It continued in this situation, with very little change, more than eight months; after which, it began rapidly to improve, and when I last heard from the patient, the sight was so perfect, that she could read and sew without glasses. I do not recollect any author who notices this important fact; although it can hardly have escaped the observation of those who have had extensive opportunities of operating on the eye.

Case VI. John Thompson was admitted into the New-York Eye Infirmary, May 25th, 1824. He had been the subject of severe iritic inflammation, which had closed both pupils. In the right eye, the blindness was complete, the only remaining aperture in the iris being filled with a mass of lymph. In the left, a small portion of the pupil remained free, and gave the patient sufficient sight to enable him to find his way, without a guide, about places to which he was accustomed. The situation of the right eye was most unfavourable to the success of an operation, but as the other was of some use, it was deemed most prudent not to risk any operation upon it, until after an experiment upon the worst eye. The operation of Coretomia, by Sir W. Adams' method, was therefore performed upon the right eye, and a large clear pupil made in the centre of the iris, of an elliptical form.* But although the operation succeeded perfectly, as regarded the formation of a good pupil, it was of no advantage to the patient. The eye proved entirely amaurotic, and remained perfectly blind. The case, however, was a striking illustration of the excellency of this mode of operating. The pupil was made with great facility, and remained afterwards permanent, without the least disposition to contraction. A drawing of it, made from recollection, will give a better idea of the appearance of the eye after operation, than any description I can give.†

The sketch, which I have now presented, of the various circumstances necessary to be understood, in performing operations for artificial pupil, is necessarily extremely condensed, in order to bring it within limits proper for a periodical journal. It is sufficient, however, to enable those who are studying this subject, to exercise their own judgment in the selection of proper modes of operating; and as the works containing full accounts of these operations, are not generally accessible in this country, I trust that the labour expended in preparing this communication will not be entirely useless.

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* Several operations had been performed upon this eye, the nature of which I could not learn; but their effect had been, the entire removal of the lens.

† See Plate, fig. 3

EXPLANATION OF THE PLATE.

Fig. 1. R. Wortendyke's eye, before the operation for artificial pupil, but after the removal of the opaque capsule of the lens. The original pupil is seen drawn down and adhering to an old cicatrix, and so small as to be useless.

Fig. 2. The same eye after the operation.

Fig. 3. The central artificial pupil made in J. Thompson's eye.

Fig. 4. The result of a similar operation on the eye of P. Simpson.

Fig. 5. The appearance of the pupil in the best eye of Steinberg, alluded to in Case I, after it had been dilated to its fullest extent by extract of stramonium. The very minute dark line, between the upper edge of the pupil, and a deposite of white lymph lying within it, appears to be the only situation, in which light can pass to the retina.

Fig. 6. The same eye, before the application of the stramonium.

Fig. 7. J. M'Gilvra's eye, before the operation; a dense cicatrix across the centre of the cornea, and the only remains of the pupil shown by a few dark lines in its original situation.

Fig. 8. The same eye, with an artificial pupil formed in the lower half of the iris.

Fig. 9. a. Reisinger's double hooked forceps.

b. A side view of a single limb of the instrument.

Fig 10. Sir. W. Adams' iris knife, resembling a very small scalpel, cutting only on one edge, and extremely sharp at its point.

ART. II. OBSERVATIONS *on the* BEST METHOD *of diminishing and extracting the head of the* FŒTUS. By ALEXANDER H. STEVENS, M. D., one of the Surgeons of the New-York Hospital.

IN the following paper I propose to inquire into the best method of diminishing, and subsequently extracting the head of the fœtus in any given case where the former or both of these operations are admitted to be necessary. When there are unequivocal indications of the death of the fœtus, and the labour is lingering, in consequence of a disproportion between the relative size of the head and the pelvis of the mother; a preternatural ossification of the head of the fœtus, or some other causes; it does not seem to admit of any doubt, that the evacuation of the contents of the head is to be effected in every instance, provided it can be done without pain or other injury to the mother, and in some cases even without these limitations. The cutting scissors that are commonly employed for the purpose of making an opening into the head, appear to me to be a very ill-contrived instrument, not well adapted to make a clear cut through the scalp, or to be introduced into the vagina without unnecessarily exposing the mother to injury. I have divided the scalp with a large spear-pointed gum lancet; and in another case, with a scalpel, of which all the edge except that within half an inch of the point was covered with a slip of linen wound spirally around it. Either of these instruments may be thus introduced safely and conveniently, upon the fore-finger of the left hand, and made to divide whatever soft parts may cover the presenting bone. If the vertex present, it will be proper, for reasons hereafter to be mentioned, to avoid cutting directly upon it; with this exception, the sutures are the most eligible places for making our incisions, for this obvious reason, that we reach the brain without dividing any other than soft parts. Scarcely any case will occur in which an opening into the head is called for, in which it will not be proper to assist the expulsion of the brain, and advance of the head at least, by the introduction of one or more fingers into the artificial opening thus made. It will often happen, however, that the exhaustion of the patient, or other circumstances, render it necessary or desirable that the head of the child should be diminished without loss of time. In what way may this object be most conveniently effected? accident suggested to me the use of a hollow cylindrical tube, not unlike a candle-mould, with a portion of its circumference cut in the direction of its axis, and turned up.* I am indebted to my ingenious pupil, Mr. J. I., now Doctor Graves, for the annexed drawing of the instrument.

This instrument is introduced with the greatest ease and safety, and at each introduction will discharge an ounce or more of brain. The simplicity of such an instrument renders unnecessary any explanation of the mode of using it, or its advantages. The contents of the fœtal head may be extracted through one of the orbits of the eyes, through the mouth, occipital portion, or vertex, without the slightest injury to the mother. But it sometimes happens, that beside diminishing the fœtal head, it is necessary to exert some degree of traction, in order to its delivery. In what way may such traction be most safely and conveniently made? "Sooner or later then, according to the state of the mother, it will be necessary that we should begin to make our efforts to ex-

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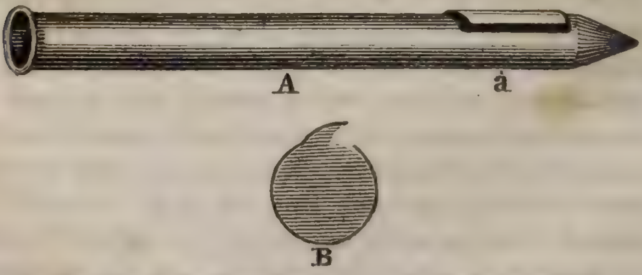
* The length of the instrument should be twelve inches, and the diameter one inch.



A. Side view of the instrument. B. Section at point a tract the head of the child; and taking care in the first place, to remove cautiously any loosened or sharp pieces of bone; I have been accustomed to avoid using the crotchet, or any kind of instrument, till I have tried what advantage was to be gained with my fingers. With this view, introducing the fore-finger of either hand, armed with my glove or some other such contrivance, into the opening in the head, and then bending it in the shape of a hook. I have pulled with all the force it enabled me to exert, repeating my attempts at intervals, when the natural efforts of the mother returned. Should the head of the child be so high in, or above the superior aperture of the pelvis, or this be so much distorted as not to admit of my giving this kind of assistance, or should it be unequal to the purpose, I carefully introduced the crotchet, guided by my left hand, into the opening in the head; and fixing the point of the hook as far from the edge of the bone as its curvature will allow, I begin to pull moderately by the handle held in my right hand, guarding at the same time the hook of the crotchet with the fingers of the left, lest it should happen to tear away the bone, or slip. If, on trial, the crotchet be found firmly fixed, but the head be too much impacted in the pelvis to be brought down with the force first used: that is, supposing the force required to extract the head be equal to 10, and the force which can be exerted by the crotchet not to exceed 5; no other purpose can be answered by striving too earnestly with the force which cannot be made to exceed 5, except tearing away the piece of bone in which the crotchet may be fixed, which does not facilitate the operation. We are to be satisfied with the steady exertion of the force 5, which being continued, will at length be found sufficient for our purpose; the resistance gradually diminishing, and the force 5 remaining. In the repetition of our attempts to extract the head, which must be made at intervals, should the bone in which the instrument was fixed, be loosened and come away, wholly or in part, the crotchet must be again introduced and fixed in another place, and the same method of proceeding followed: remembering also when we extract, to pull with some variation in the direction, but always in the line of the cavity of the pelvis. In almost every case of difficulty, the principal obstacle or cause of the difficulty, is at one particular part of the pelvis, and when the head has passed that part, there is no farther occasion for using much force; and we are afterward to proceed very circumspectly, that there may be no laceration or injury done to the parts of the mother, internal or external. The principle I wish to impress on the minds of those who may be embarrassed with difficulties of this kind, is, that time is equivalent to force, and that no advantage will be obtained by pulling away small pieces of bone, except such as were loose, and likely in their passage to injure the soft parts of the mother, or by acting hastily or violently. On the contrary, when the instrument is once firmly fixed in a part of a bone which affords a good hold, I have been cautious not to tear it away by pulling rashly, considering that, as something like breaking the instrument with which I was performing the operation. Where the resistance has been very great, often making my first efforts with all the force and skill I could safely exert without success, leaving the crotchet fixed, I have desisted for an hour or longer, and then renewed my attempts." These observations of Dr. Denman may be considered as a fair exposé of the practice recommended by our best writers. No one who has not witnessed or experienced the embarrassment arising from the breaking of the fœtal bones, the slipping of the crotchet, or the constant exposure of the vagina to be wounded by the instrument, will duly appreciate the superior advantage of the method I am about to recommend, viz.: *to hook the crotchet in the falx of the dura mater;* this membrane is abundantly strong enough to bear the application of any force that can with propriety be applied. There is no slipping, no splintering of bone, no displacing of the head from the axis of the pelvis. On the other hand, the vertex is steadily maintained in its place, and by twisting the crotchet, the bones are gathered around it as a centre; and the head may be made to rotate in any direction that may be required.

Art. III. *An Account of the* Topography, Weather, *and* Diseases *of* Nassau, *Island of New-Providence, Capital of the Bahamas, West Indies.* By P. S. Townsend, M. D. of New-York.

[Continued from page 78.]

DISEASES.

	Mar	Apr.	May	June	July	Aug.
Abortio - - - - - - -				1		
Amenorrhœa - - - - -						1
Anthrax - - - - - - -			1		1	
Apoplexia - - - - - -				1		
Asthma - - - - - - -			1		1	
Cephalalgia - - - - - -				2	2	
Chorea Sancti Viti - - - -					1	
Convulsio - - - - - - -	1			2	1	1
Constipatio - - - - - -					1	
Coup de Soleil - - - - -				1		
Dysenteria - - - - - - -	1	1	1	8	8	3
Diarrhœa - - - - - - -					2	
Dysmenorrhœa - - - - -	1	1		2		1
Dyspepsia - - - - - - -		1			1	
Erythema Mercurialis - - -				3	1	
Febris Intermittens Quotidiana					3	
Febris Intermittens Quartana					1	
Febris Remittens - - - - -					1	
Febris Remittens Biliosa - -			1	2	3	
Febris Remittens Infantilis -			1		2	1
Fistula in perineo - - - -						2
Furunculus - - - - - -					prevalent	
Hæmorrhois - - - - - -					2	1
Hydrops Universalis - - -	1					
Hydrothorax - - - - - -				1		
Hysteria - - - - - - -				6		
Leucorrhœa - - - - - -				2	2	1
Mania - - - - - - - -					1	
Menorrhagia - - - - - -				1		
Peripneumonia - - - - -	1	1				
Pterygium - - - - - - -				1	1	1
Rheumatismus Universalis -					1	

	Mar	Apr	May.	June.	July.	Aug
Rheumatismus Thoracicus					2	3
Rheumatismus Lumbaris - -						1
Synocha - - - - - - - -				1	2	
Syphilis - - - - - - - -					3	
Tonsilitis - - - - - - -	1				1	
Tremor a potu - - - - - -		1				
Typhus - - - - - - - -						1
Urethritis - - - - - - -			1	1	2	3
Vermes - - - - - - - -			1		1	
Vomitus (a potu) - - - -					2	

Anthrax. The case of Anthrax which occurred in May, was one of the most formidable instances of the disease I have ever seen. The particulars of this case have already been published in this journal. (No. XI.)

Apoplexy. The case of Apoplexy occurred in a very robust young woman, where the menses had been suppressed, and on whom an attempt was made to restore them by administering an emetic previous to venesection, and without medical advice.

Asthma. The most alarming of the two cases of Asthma, was in a widow, aged 40, in whom the paroxysms were so exceedingly violent, as to give the appearance of a person in the agonies of death. She had been more or less afflicted every year with this malady since the age of eleven months. The following combination recommended by Dr. Tynes, under whose care she had been for a long time, always operated like a charm, and though it could not annihilate the complaint, never failed to afford her, she informed me, almost instantaneous relief.

℞ Elix. Paregor. oz. j.
Tinc. Thebaic.
Vin. Antimon. aa dr. j. M.

a teaspoonful frequently, or more, according to circumstances.

The catamenia in this case were regular, and also the other functions. During the paroxysm she usually vomited, and after it had subsided, complained much of acute pain in the muscular parietes of the thorax.

Cephalalgia. All the cases of Cephalalgia, arose from a redundancy of bile, and they were generally unaccompanied with fever; the pain was located over the eyebrows across the forehead, attended with soreness, but not redness of the eyeballs. The tongue was usually covered with a dirty yellow moist fur, and the mouth affected with a bitter taste. I consider this species of Cephalalgia to be one of the most idiopathic indications of a redundance of, and obstruction in the biliary secretion, of any that I am acquainted with. The affection was relieved by venesection (if obstinate), emetics; blister across the shoulders and back of the neck, cathartics, &c.

Convulsio. The case which occurred in March, was in a mulatto child, aged about three years, who being the pet of the house servants, had been indulged in rather richer fare than he would have received if he had been comprised in one of the number of field negroes. The consequence was, that he had been stuffed with fat and greasy food of all kinds whenever he desired to eat, and had become remarkably gross. Before I could make an impression on the disease, I was obliged to open both temporal arteries, and a vein in the hand, plunge him several times in a hot bath, blister the neck and extremities, and after the effects of the laudanum given at the beginning had gone off, to administer two large cathartics in succession, each containing calomel and rheubarb, aa. grs. vi. besides which, enemata, pink root tea, &c. After the fits had continued almost without intermission for 24 hours, the tone of the circulation, which had been augmented to a very high degree, became relaxed, the fever subsided, and the child recovered.

It was not the effect of worms, for only one was brought away, nor was it the invasion of any particular type of fever, as was proved by the rapid convalescence, and the symptoms associated with the convulsions; but it was the simple result of the high state of tension, and sthenic diathesis induced by previous engorgement of the blood-vessels from the use of animal food, as roast beef, rich gravy and turtle soups, &c. all of which were extremely improper for the inflammatory temperament and feeble digestion of a child of that age. One of the other cases of convulsion, proceeded from worms (lumbria) and dentition, and is remarkable from the circumstance of the child who was the subject of it, being afflicted with the *dirt-eating disease*, though only twenty months old, shewing that this complaint, which Dr. Dancer compares to Chlorosis in women, cannot in this instance at least have been feigned. The mother told me, whenever it could steal away slyly, it was found lying in the path or road on its belly, licking up the dirt and dust.

Dysenteria. What are called the spring rains, set in the last week in May, and continued to the end of the first week in June. The mercury in the thermometer, which for nearly the whole of May, had every morning by eight o'clock reached as high or higher than 80°, fell on the 25th of the month several degrees, and continued to range between 73° and 77° until the 6th of June. During this period the rain fell almost every day in torrents on some part of the day, but only for a few hours at a time; the sun coming out between the showers. This sudden change of weather from a hot dry atmosphere, to one chilled by a succession of heavy rains with alternations of sunshine, produced a number of dysenteries during June, which may be said to have been the first month since my residence in Nassau, in which there has been any thing like a prevalence of sickness, and that by no means to the extent to merit the name of epidemic. In children under two and three years, it usually proved fatal, and the older the patient was, the more probability also was there of recovery. I believe indeed there was not an instance of a person dying who had arrived at the age of puberty, the constitution having by that time gained sufficient vigour to recover from the irritability and emaciation which this harassing distemper produces. Of the symptomatology of a disease so universally understood, I shall say but few words. There were very few cases in which it was attended with febrile irritation, except in children, the local affection at their tender age seeming to re-act more powerfully upon the constitution than in those that were older. The tormina or twisting pain around the navel, the tenesmus, the lotura carnia, (called here *cold*) nausea, scybala, &c. were all precisely such as they have been so often described by those who have written upon this subject. In some cases pure blood was discharged to the amount of several ounces at a time, and if it is considered that the passages amount sometimes to forty in twenty-four hours, one may readily conceive the dangerous nature of the disease when the evacuations assume that character, and how seldom venesection can be requisite under such circumstances. In one case of a woman, who had nearly attained her sixtieth year, and where bloody discharges came on towards the conclusion of the complaint, I congratulated myself in not having bled her, or used any violent depleting means in the beginning. With great exertions she recovered.

Many cases seem to have been caused by the irritation of an over abundant quantity of bile in the primæ viæ; for they were relieved when the constriction was taken off, and copious bilious evacuations obtained by powerful and repeated cathartics. Most of the cases of dysentery this month no doubt were occasioned by the weather, but some of them were in part attributable also to certain fruits which began now to be brought in, before they were perfectly ripened, or in a state to eat. Such were the pine-apple, mammie, limes, papau, sour-sop, &c. most of which we are entirely unacquainted with in a cold climate.

I have heard some ascribe this disease to rain water washed down from the hill in the rear of the town into the wells, the water being in general very pure and uncontaminated with saline or other matters, even within a few yards of the sea, owing to its being filtrated through the solid porous rock out of which the wells are excavated. I think this opinion improbable: in the first place, because I do not recollect to have observed the colour or taste of the water changed in any part of the town in which I drank it; and in the second place, because several cases of dysentery occurred in the Poor's House during my attendance there, and where the wells are situated on a knoll in the rear of the building, in such a manner that the water from the adjacent hill could not wash into them.

My treatment of the disease was extremely simple but very active, and I may add, without perhaps appropriating too much to myself, that it was eminently successful. If the excitement or constitution, and time of life, and other circumstances, admitted the employment of the lancet, that remedy when indicated, was always had recourse to, provided I was called early in the disease. I have frequently annihilated the disease in a few hours if called in time, by giving a powerful emetic, the whole at once, composed of

Tart. Ant. et Pot. grs. v.
Pulv. Ceph. Ipecac. grs. xv. M. fiat pulvis.

When there was much constriction in the intestinal tube, and much pain at stool, I never failed to begin with this invaluable combination. It has the happiest effect in relaxing the whole system, and particularly the spasm which exists in the muscular coats of the colon and rectum. After the nausea and vomiting had subsided, the medicine invariably passed off by stool, (indeed in some instances more frequently than it produced vomiting) leaving the patient free of pain and tenesmus, and in some instances, of every other symptom of the disease. If, however, the irritation in the bowels continued, the following combination was given a few hours after:

℞ Sub. Mur. Hyd. grs. xv.
Pulv. Conv. Jalapi dr. ſs. M. ft. pulvis.

I was often under the necessity of repeating this cathartic for several days, and also the ipecacuanha alone in small doses, together with the application of a large blister over the abdomen, and emollient injections, and the pediluvium several times in the twenty-four hours. I confined the patient rigidly to bland drinks, as mutton soup with a large quantity of ockro boiled in it, arrow-root, sago, tapiocha, barley-water, gruel, and lemon grass, basil or common tea, never permitting him to deviate out of this catalogue, and to take no other food whatever, of any description, besides, to avoid especially, fruits. At the same time to be clothed in flannel, and to avoid damp air, and the night dews. After the disease had continued for a week or ten days, and the discharges became more healthy, but were attended with tenesmus, and occurred too often, and if at the same time the local and constitutional irritation had mostly subsided, leaving nothing behind but extreme emaciation and debility, I did not hesitate to commence immediately with opium, giving from three to four and six grains in the afternoon and night, in pills with or without ipecacuanha, continuing the patient upon the same diet and regimen, with the exception of adding daily a small quantity of brandy or wine to his arrow-root and gruel.

You will perhaps be surprised to see recommended such large doses of calomel and antimony. In this climate, what may be called the *centrifugal force of the circulation*, or the tendency of the fluids to the skin, preponderates so much over that to the interior parts of the organization, that those medicines intended as cathartics, will pass off in cutaneous perspiration, if not given in sufficiently large quantities. In relying upon small doses, the calomel gradually insinuates itself into the fluids, and the patient becomes salivated before we are aware of it, and as effectually as if it had been combined with opium, for it must be recollected also in reference to the principle I have assumed, that the salivary organs are located in the teguments upon the external part of the body. I have seen several persons in this town who have lost nearly all their teeth,* and been labouring for years under the influence of mercurialization, in some cases perhaps thus unintentionally induced by the injudicious administration of this medicine.

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* In most of these cases, however, mercury had been given with an intention to salivate. In two children of this description, one of whom fell a victim to the mal-administration of this medicine, portions of the alveolar

Towards the termination of the disease, I found the sedative properties of opium occasionally combined or alternated with ipecacuanha, and a resolute adherence to bland liquid nourishments, sufficient to check the evacuations, and restore the tone of the bowels, without the aid of lead or vegetable astringents, which from what I have seen, I should suppose to be medicines of very doubtful efficacy, if not dangerous to be administered at any stage of the disorder. In some few cases, I have seen an obstinate tenesmal diarrhœa prolonged for months after the primary affection had been entirely removed. In such cases, the failure of almost every remedy prescribed, and the danger of the patient sinking under the exhaustion produced, tempts one to have recourse to whatever may have the reputation of astringent properties. The sea-grape tree, the pomegranate, bay-cedar bush, bark of the guava, and many other indigenous plants of these islands, are much used among domestic remedies. I am induced to believe they generally do more harm than good, and ought not to be administered but with the greatest caution.

A drink composed of a small quantity of cinnamon, with gum arabic boiled in milk, employed as an auxiliary to opium, I have found highly useful at this stage of the disorder.

I have dwelt more particularly on the subject of dysentery, because although it did not at any time assume the character or type of camp and epidemic dysentery, it was the principal disorder with which I have had to contend, and was the only one that can be said to have been at all prevalent, as you will perceive by the report for July and August.

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process near an inch in length, and half an inch in breadth, with the teeth firmly set in them, were entirely denuded of the gum, and separated from the jaw-bone, so as to be removed without difficulty by the aid of the fingers! I have one of these pieces in my collection. There was no suspicion of venereal taint in either case, and nothing that could have justified this barbarous practice.

Erythema Mercurialis. I have had occasion already to allude to the abuse of mercury. You would be shocked to hear how unconcernedly many physicians of the West Indies speak of salivating their patients, and grieved to see the loathsome and painful affections which they have substituted in the place of fevers, liver-complaints, and dysenteries, for the removal of which they had unnecessarily employed it. When the physician from defect of preliminary education, too limited an experience, or too dull an understanding, finds himself at fault, he flies to mercury as a forlorn hope, which, though it may be the means of extricating himself from an unpleasant dilemma, entails upon his patient complaints that may not only be prolonged through life, but extended down as an hereditary legacy to unborn generations.

Two of the cases to which I refer under the head of erythema mercurialis, had been mercurialized for gonorrhœa! Neither of them had ever had chancre, or any symptom of syphilis. In one case a chronic irritation in the mouth and throat, with rheumatic pains, hypochondriasis, &c., were the consequence of this mal-practice. In the other, the distressing affection of anaphrodisia was induced. In the first case, I immediately suspended the blue pill and alterative drink which he had been using, I believe, for a year, and put him on tonics, exercise, &c., which soon restored him to health. The other was cured mainly by the local cold bath.

Febris Remittens Biliosa. There have been but very few cases of fevers, much fewer than could have been anticipated from the extreme heat of the first two months of summer, especially in July, in which month, however, they were as might have been expected, more frequent.

As the summer opened, the few cases of remittent fever I attended became complicated with bilious symptoms, but in none of them did any peculiar phenomena present themselves different from what I had been led to expect from the writings of West-India authors, and from similar fevers that I had seen in the United States.

Nor could I discover any peculiarities even in two of the cases that were persons from the north, unacclimated, one of whom had only been a resident here a few months, and was a Scotch clergyman, in the prime of life, of sanguine temperament, robust, plethoric habit, and in the most perfect enjoyment of health. This case happened in May, and the gentleman in whom it occurred, was the very counterpart of those subjects from a northern clime, which are declared to be most obnoxious to yellow fever, on coming into the tropics. If, as some writers affirm, yellow fever be an endemial indigenous remittent fever of the tropics, incapable of being propagated by contagion or importation, but produced by atmospheric or climactic circumstances, acting within the equatorial regions upon the constitution of those who have recently arrived from cold countries, then I aver that the case of which I speak was a most fit subject for it, and ought to have developed the pathognomonic symptoms of the disease. But if this was a case of yellow fever, and the genuine vomito prieto of the West Indies, then am I willing to declare myself totally unacquainted with it, and bold to say, that it is specifically and widely distinct from the vomito prieto which I have seen at New-York, and from the vomito prieto of the West Indies, described in such glowing and inimitable colours by Towne, Lining, Warren, and the other high authorities upon this disease.

In the particular example to which I allude, and which may be considered as a good specimen of the type of bilious remittent, there were no external agents to which it could be ascribed, excepting the influence of a tropical heat in producing an inordinate secretion of bile, which without doubt was the exciting cause. He had been exposed to no miasmatic exhalations, nor was there any of those diseases which arise from such causes prevailing at the time. Indeed the town had enjoyed uninterrupted health for months. The patient did not labour under any extraordinary degree of arterial excitement at any period of the disease. He had been complaining for two or three days before I saw him of nausea, vomiting, and some griping pain in the abdomen, and pain across the kidneys, to which last he had been often accustomed, but still went about. I found the pulse 120, and from its strength felt authorized in using the lancet to the extent of ℥xx, which was repeated on the following day. From the invasion of the fever, there was an invincible torpor in the alimentary canal, which, however, was finally subdued on the 4th and 5th days, by the active employment of calomel in pills of grs. x.—xv. each every few hours, alternated with saline and other cathartics. From the second and third days there were evident remissions, usually in the morning towards noon, and again towards midnight, the exacerbations coming on in the intervening periods. There was yellowness but no redness of the adnata, or pain in the eyeballs, but great irritability about the epigastrium throughout his sickness ; so much so, that vomiting was excited on sitting up, or on the administration of enemata. This caused me to apply a large blister over that part, and to abandon the idea of using any thing of an emetic property, for fear the coffee-ground vomiting, which Chisholm mentions as one of the occasional symptoms of the worst form of bilious remittents in the West Indies, might be brought on. The bowels having been plentifully evacuated by copious fœtid bilious stools, the skin freely opened, a solution of the disease was obtained about the tenth and eleventh days. I discovered immediately that a favourable crisis had arrived, when I perceived that the skin had been so much unlocked as to excrete perspirable matter in great abundance, with a strong, bitter and bilious odour, that the stools which had been for three days serous and watery, now became thick, yellow, and fœtid, and the urine copious and strongly tinged with bile.

If I had been prescribing for a native, or one who I was satisfied had been acclimated to the country, I should not have hesitated a moment to have administered an emetic, and if necessary, to have repeated it. But in the present instance, intimidated perhaps by the bold asseverations of those who entertain a different opinion from myself, I thought it most prudent to err on the safest side, and therefore declined pushing the treatment to the full extent I thought the symptoms would have warranted.

I leave it to you to determine, whether, in your judgment, the above assemblage of symptoms coincide with what you have been accustomed to see in the yellow fever, or vomito prieto of New-York.

Furunculus. The hot dry weather of July was thought to have been the cause of boils which prevailed during this month, particularly in children about the face and shoulders.* In a case which occurred in August. these indolent inflammations appeared over every part of the body and extremities of a negro man, aged about 30, and were so painful as to disable him from work. A mercurial cathartic and low diet, gave immediate relief. The emollient treatment is to be preferred.

Hæmorrhois. In two bad cases of this disease, the tumours were seated externally, and had existed for years. With the aid of the forceps and scissors, the whole of them were removed, leaving the anus in a perfectly natural and healthy state. Before, however, the cicatrization was completed, it was found necessary in the worst case, to administer enemata of warm oil, warm water, and laudanum, and also emollient antiseptic anodyne poultices.

Hysteria. In the month of June there was an unusual number of cases of Hysteria ; and the complaints of females in that and the following month, were usually complicated with hysterical symptoms. This circumstance was perhaps connected with the change of season from spring to summer. One or two cases required venesection and other depleting means ; but in general, relief was procured by embrocations of ammonia and laudanum over the epigastrium, the warm bath, enemata, and antispasmodic anodyne drinks ad libitum, until the spasms, globus hystericus, risus sardonicus, and other alarming symptoms had disappeared. I have seen the disease at almost every period of life, from fifteen to seventy. In one of the cases, who was an unmarried woman from the United States, that had not been long in this country, the same peculiar guttural laugh, that characterized her during health, formed one of the most prominent symptoms of the disease.

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* The extreme hot weather of this month brought out the prickly heat upon almost every one, and in some instances an eruption of coarser and larger pimples, when it was denominated *horse heat.*

Leucorrhœa. I have found this distressing complaintequally obstinate and prevalent among the females of this, as among those of a cold climate. The tonic treatment, with few excepitons, is that which is most successful. The worst form of this complaint, is that which is accompanied with dysmenorrhœa at the recurrence of the catamenia. In those cases I have seen the patient suffer the most excrutiating agony from pain shooting from the uterus and pubes up the belly into the breasts, though the circulation was at the same moment slower perhaps than natural, and the extremities cold. Laudanum administered ad libitum, both by the mouth, enemata, embrocations, and thrown up into the womb, together with warm stimulating drinks, and the warm bath, and cathartics, were sure to produce a mitigation, and ultimately a subsidence of these alarming symptoms.

I have found no astringent lotion preferable to another, though I have combined those that have that property, both from the mineral and vegetable kingdoms, in almost every proportion. I have not been able to persuade myself yet, of the propriety of administering lead internally, as recommended by our able fellow-countryman of Philadelphia, Dr. Dewees.*

Mania. I have seen but two cases of Mania upon the island. One chronic, in the person of a French mulatto female, who is said to have been an actress in Martinique.

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* The volatile tincture of guaiac was used in one case in which the formation of a false membrane was suspected, and with evident benefit.

The other was a young black man, a butcher, who was seized with the disease in market, in the month of July, and died the following day.

Peripneumonia. This disease was generally mild in its symptoms, compared with pulmonic affections in the United States, except in Negroes, whose circulation being much slower, and quantity of absolute heat consequently much less than in the whites, were of course more sensitive to the vicissitudes of weather, and therefore more liable to the complaint, and required more active treatment. Dr. Tynes, who has been a resident practitioner here for thirty years, and who is a close observer and sound reasoner upon what falls under his notice, informs me that phthisis pulmonalis, especially among the blacks, is by no means a rare disease in this island. He has seen to the number of twelve cases in a year, most of which proved fatal.* The natives, and especially that class of them (the negroes) whose constitutions are by nature best adapted to a hot climate, are of course the most obnoxious to pulmonic disorders. There are many of the whites who, though born here, are less subject to this class of diseases than they would otherwise have been, from the practice which many parents have of educating their children in England, or, as it is familiarly termed, at home, during which time they lose of course a part of their susceptibility to diseases of cold countries.

Pterygium. [Membranous and fleshy.] I have found this one of the most prevailing affections in the island, and have no doubt but that it is attributable to the constant glare of a hot sun, reflected from the roads, which are rendered almost perfectly white when the rock through which they are cut becomes pulverized. The houses also being generally painted of a light colour, or when built of the rock, stuccoed over with a white plaster of the same material, as in Paris and most French cities, assist in producing the same effect.

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* The respective population of black and white was at the time about the same as at present.

I have operated upon several persons for this complaint, and never failed to remove the dimness of vision by the absorption which the operation caused, of the thickened membrane of the conjunctiva in the membranous species, and of the red fleshy lymph deposited beneath this tunic in the fleshy species. In the membranous species, that part of the pteryx which is extended over the cornea, is semi-transparent.

According to Mr. Travers, this affection of the eye is much more common in warm than in cold climates.

Rheumatismus. This is quite a common complaint, and is generally caused not by the direct action of cold, but by suppressed perspiration, to which persons are very liable in this climate, upon the least change of temperature, so profuse is this discharge on taking the least exercise in warm weather.

Inasmuch as a residence in a hot climate calls into constant play the functions of cutaneous transpiration, and exacts therefore a more perfect and elaborate development of the apparatus employed in this office, all those agents that have a tendency to increase the action of the cutaneous vessels artificially, must be injurious to health: I therefore very much question the utility of wearing flannel next the skin, to the extent to which it has of late become so fashionable in the West-Indies.

A large proportion of the saline, acescent and other excrementitious parts of the fluids which in a cold country are discharged by the bowels and urine, in this climate are eliminated through the exhalent vessels upon the surface of the body; a fact very obvious to the plainest understanding, by the abundant perspiration which takes place, and by its strong *ammoniaco-oleaginous* odour in whites as well as blacks, and also by the scanty, limpid character of the urine,* and the scantiness of the stools. It is this which makes the skin the most important perhaps of all the organs of the body, as a medium through which curative agents may be employed in the diseases of tropical countries. The power therefore which nature has placed at our disposal over this part of the system, ought to be held in reserve, to be used when it can be of most essential service, and not misapplied and wasted by over-exhausting the cutaneous functions during health.

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* Though the greater portion of the West-India Islands are of calcareous formation, and the water which they afford necessarily imbued with this earth, the determination of the fluids to the kidneys and other internal organs is so feeble, that calculous complaints are seldom or never heard of.

In those who have recently arrived in hot climates, and whose organization has not become moulded or remodelled, as it were, to the new circumstances under which they are placed, the use of flannels, to a certain extent, and for a certain time, may be salutary, by accelerating a process which nature, unassisted by this means, would be more tardy in accomplishing.

But in those who are natives, or whose ancestors have lived for ages in the climate, and whose constitutions therefore have become as thoroughly assimilated to it as the indigenous plants of the country, the use of flannels must not only be superfluous, but highly deleterious.

That species of rheumatism which was seated in the pectoral and intercostal muscles, appears to have been the most prevalent, and was often mistaken for a pulmonic affection.

Synocha. I have seen several cases of pure synochal or inflammatory fever, unaccompanied by any local or organic affection whatever. In one, there was in the beginning profuse epistaxis, which, however, did not supersede the necessity of repeated venesection.

The subject of this case being a negro, there was not that inordinate excitement in the blood-vessels which is usually present in this type of fever. By pursuing steadily and actively the antiphlogistic treatment, the fever gradually abated, and the patient recovered. The tongue during the

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which, it must be confessed, is an exemption that ought to be esteemed an equivalent, almost for all the inconveniences which one is obliged to endure in a hot climate.

disease was covered with a bright white thin fur, but there was not the slightest irritability of the epigastrium, or of any other part, except a pain in the limbs, and particularly in one of the knee-joints, towards the termination of the complaint.

So far then as my limited experience goes in tropical fevers, I should not hesitate to declare that the bilious remitting fever, and the ardent or inflammatory fever of this climate are as specifically different from, and unlike yellow fever, [the vomito prieto,] as they are in the temperate zone.

Syphilis. The cases of this disease which have fallen under my notice, were chiefly those in which secondary symptoms existed. The venereal virus seems in this climate more disposed to expend its force in what are usually denominated secondary, than in primary symptoms, owing perhaps to the same law in the physiology of the fluids, which has already been adverted to. Chancres and buboes are much more uncommon than deep fœtid ulcerations in the throat, copper-coloured eruptions upon the skin, thickening of the ligaments, ulcerations above the ankles, nodes, warts, tumefactions of the glands of the throat, with sympathetic affection of the auditory nerves causing loss of hearing, rheumatic pains, caries of the bones of the nose and of the small joints of the extremities, &c. I have seen several patients afflicted with the most formidable symptoms enumerated in the above catalogue, in whom not a vestige of primary disease could be discovered in the organs of generation.

Against this peculiarity, however, nature has made ample provision by storing the vegetable world with abundance of plants which possess specific and powerful virtues in neutralizing and eradicating the taint with which the blood becomes impregnated in this loathsome malady.

Among them are the guaiacum, long so celebrated, the rat-root, milk-weed, and numerous others. All these plants are indigenous to this climate, and possess invaluable alterative properties. In one case, a mild decoction of the milk-weed was the only remedy which seemed to make any impression upon an inveterate case which had resisted all the usual prescriptions. In two other cases the decoction of these plants proved of most decided benefit in conjunction with the mineral acids and tonics. I have of late made use of a compound decoction consisting of the

Rat-root,
Milk-weed,
Guaiacum,
Sarsaparilla, and
Mezereon.—aa. ℥ij. coque in aqua
fontana ℥lx. ad. ℥xl.

Typhus. As has been remarked by Sir Gilbert Blane and others, typhus in this climate is a rare disease, except under those peculiar circumstances which favour the concentration of human effluvia, as on shipboard, in prisons, &c. In domestic life this peculiar condition of things seldom or never happens, because the windows and doors of the houses being almost constantly open throughout the year, the air within has as free a circulation, and is in every respect as pure as that without. Nevertheless, some particular state of the fluids in an individual may give occasion to the generation of the disease within the system, without the co-operation of external influences.

Such was the solitary case which is inserted in the table of diseases, and which occurred in the person of a black girl, in a house situated in a most airy and agreeable part of the island, occupied only by the mistress and patient, and free from every suspicion of an infected atmosphere within doors or without. The symptoms were not aggravated, but the type of the disease was fairly and unequivocally developed. —The pulse was frequent and soft, the skin dry and hot, and the tongue and lips glazed over with parched scales.* There was great restlessness and anxiety, and want of sleep, and occasional delirium, and what would have been considered rather anomalous in a cold climate, considerable irritability in the stomach, with occasional rejection of the food and medicines administered. There was a torpor also in the alvine and urinary functions, both of which are characteristic of this fever. There was high arterial excitement in the first three or four days of the disease, with bilious symptoms, and some pain about the umbilicus and epigastrium, but no symptom which could lead to a suspicion that the fever was complicated with any organic affection. The first remedy administered was an emetic, afterwards gentle cathartics, and ablutions of cool vinegar and water, enemata, and then stimulant antiseptic drinks, and effervescing mixtures, by which means a crisis was obtained about the ninth day. It is to be observed here, that the constitution of the native negroes, is apparently more completely assimilated to the climate than that of any other description of persons, on which account they are much more able to sustain, and are much more sensibly benefitted by the action of emetics than the whites.

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* The excretions also between the labia and nymphæ, produced an excoriation of those parts, and emitted a putrescent odour.

I did not perceive in this case the least analogy to the vomito prieto, though this last disease has been by some authors considered a modification of typhus.

Urethritis. The discharge from the urethra in the beginning is very apt to be mingled with blood, which perhaps is salutary so far as it helps to reduce the local inflammation. Tumefaction and induration of the testicles, strictures and fistulous openings are not unfrequently met with among the blacks, as the consequences of this complaint, partly owing to their own neglect, and in part attributable to the mal-treatment and empiricism of overseers, to whom unfortunately the owners of plantation in the out-islands where no medical aid can be procured, are obliged to entrust the lives of their slaves.

Vaccination. As this disease has of late excited much interest in the United States, it may not be irrelevant to state that during the month of July, I vaccinated gratuitously, about sixty blacks and mulattoes, from matter between glasses received in the spring from the London Vaccine Institution. Though July is the hottest month of the year, and was this year peculiarly distinguished by its extraordinarily high temperature, the virus by being inserted in its liquid and fresh state, was communicated with as much facility as if the weather had been cool. There was scarcely a single failure, and the vesicle was in every case genuine. I attribute this susceptibility to receive the infection, to the more highly organized condition of the cutaneous tissue in a hot climate, on the same principle which I have already alluded to. In confirmation of which it may be added, that there was in a great proportion of the cases, a good deal of constitutional irritation, which however, did not prevent the successful issue of the local affection. The virus was taken from the arm on the 8th day, at which period it was in almost every instance limpid, and semi-transparent, less turbid apparently than after the same lapse of time in a cold climate.

ART. IV. OBSERVATIONS *on the causes of* ENDEMIC FEVER, *in a letter addressed to* ALEXANDER COVENTRY, M.D. *late President of the Medical Society of the State of New-York.* By WESTEL WILLOUGHBY, M.D. Professor of Obstetrics in the University of the State of New-York.

Fairfield, (Herkimer County,) December 18, 1824.

MY DEAR SIR,

WHEN I had the pleasure of seeing you at your house in September last, we had some conversation on the subject of fever.

I remarked with pleasure that our views relative to the cause, nature, and diversified appearance of endemic, (or what is generally denominated by most of our physicians, the typhus) fever of our country, were strikingly the same; and mentioned to you, that I had seen in the same year, and arising from apparently the same cause, fever, varying in its type, from the simple inflammatory, to the most malignant typhus.

Not long since, your son informed me that it was your wish that I should give you a statement of a case mentioned in the above conversation, where the symptoms were correspondent with those of yellow fever. I now comply with that request. Since my residence in and near this place, (thirty-two years) I have had various opportunities of observing and investigating the cause of endemic fever. It prevailed in certain neighbourhoods in the years 1792 and 93, and again in the summer and autumn of 1796, and in the winter and spring of 1797.

But the most distressing and widely diffused state of fever prevailed in this country, in the spring, summer, and autumn of 1803. Emphatically may it be said of that year, that the "mourners went about the streets."

I do not recollect a single year since I have been a physician, that I have not witnessed sporadic cases of fever originating from some local filthiness. But we have not had any thing like a spreading state of fever since 1803; and probably we shall not again witness such a scene. The cause cannot again exist; to wit, the decomposition of vast bodies of vegetable matter; for independent of the foliage of the forest, and the luxuriant growth of vegetables from the woodlands that were in a decaying state in the spring of 1803, may be added, the decomposition (in every field) of stumps, old logg-heaps, *girdled* and felled trees. These pestiferous bodies being acted upon in the spring of 1803, by more than an ordinary share of vernal heat and moisture, readily account for the prevailing fever. The forest having been subdued by the axe of the industrious farmer, the stumps and decaying trees having disappeared, and the fields annually clothed with verdant crops, while our district of country being elevated and airy, with no sluggish streams, no stagnant ponds, or marshy grounds to annoy our borders; we have an exemption from the most prolific source of febrile excitants.

But from those very local causes of fever, such as the decomposition of vegetables in cellars, large quantities of barn manure in yards, stagnant ponds of water from broken aqueducts, &c. I do not expect an exemption, for it is impossible to make the great mass of the community sensible of the danger arising from those deleterious sources.

On the 20th of May, 1816, I was requested to visit J. Holliday's family of Russia, several of them being sick with fever. Dr. Wm. Frame was the attending physician. On my arrival I found the eldest son dead. The father was in a state of fever the most unpromising, from repeated hemorrhages from the bowels; his wife and three other children labouring under febrile excitement, but not dangerous. The servant-maid and a hired man, were the only inmates of the family that were able to keep about, and even the maid-servant had a very sickly countenance.

Anxious to learn the cause of so much distress in this family, as it was universally healthy in the vicinity, I asked the attending physician, what could produce the fever? He observed he did not know, and was unable to account for the source of the mischief. Mr. H's dwelling was elevated, airy, and his house supplied with an abundance of good water.

Suspecting the cause, I inquired if the cellar was clean; one of the domestics informed me that there had been a quantity of frozen potatoes and some cabbage left in the cellar, which gave out the most offensive smell, and that she could not go into the cellar without vomiting.

This at once accounted for all the distress The offensive materials were immediately removed by the neighbours, but not with impunity; most of them became sick, and vomited while executing this neighbourly kindness. Under proper treatment the family all recovered, except the eldest son above mentioned; he fell a victim to the complaint on the seventh day from the attack, labouring under most of the symptoms of typhus gravior.

Mr. H. the father of the deceased, nearly shared a like fate: his fever was strictly malignant, while the residue of the family (four in number) might be said to have a mild inflammatory rather than typhus fever.

In 1823, Dan Post, Esq., one of our ablest and best farmers, neglected to remove some obstruction that prevented the water escaping from the door of his kitchen, where it was deposited from his aqueduct.

The water flowed back under his wood-house, forming a pond of stagnant water, in which were deposited a large quantity of chips, and other perishable materials. It was observed, that as the summer advanced, a most disagreeable smell arose from this place, yet not knowing the danger to which they were exposed, the family neglected to remove the cause. This became, however, a source of so much annoyance, that on the first of August, the drain was opened, and the stagnant water carried off; but this was too late; fever had already made its appearance in the family, and by the 10th, there was not a solitary individual of the family, (ten in number) who was not confined with fever. The complaint was more than ordinarily inflammatory; they were very sick, but all recovered under the rigidly antiphlogistic treatment.

On the 20th of August, 1823, I directed my two hired men to remove a heap of manure from the barn yard to the field: the weather was warm, and the manure upon its outer surface dry. Towards evening I went to the yard, and was surprised to find that as the workmen penetrated the heap, it became very moist, and gave out a most disagreeable stench: I immediately ordered the men to leave the manure, which they did. The eldest of the hired men observed previously to going to bed, "that he had not worked harder than usual, yet he was never sensible of being *so tired after a day's labour*;" before morning he was taken with chills; these were soon followed by feverishness, cephalalgia, oppression at the præcordia, and during the exacerbations, some delirium. The fever assumed the remitting type, and was quite inflammatory. It continued until the 7th day, and then gradually disappeared. An involuntary twitching of the muscles of the neck, so as to throw his head from his pillow, was an attendant in his case: this phenomenon was without pain, and returned at uncertain intervals, and generally continued from 10 to 15 minutes at each attack. The other hired man sickened on the second day after working at the manure, and was much sicker than the former; the remission between the exacerbations was longer, yet he ran down into a low state of fever, from which he recovered with difficulty. These local causes of fever are so exactly in accordance with the cases mentioned in your most valuable communication to the State Medical Society last winter, that I was unwilling to pass them while making a few observations on fever. I will now briefly state one or two cases of the more malignant form of fever. as mentioned in the conversation alluded to above.

From my note book. June 4th, 1806. Benjamin Randell, aged 22, sanguine temperament, is this day dangerously sick with malignant fever. He complained on the 2nd of great weariness, severe pain in the head, back; chills alternating, with heat, sickness at the stomach, &c. I visited him on the 3d. Great pain in the head, giddiness upon rising up, appetite gone, tongue white, but thickly loaded, skin dry, temperature somewhat increased, excretions diminished, bowels confined, pulse accelerated and somewhat tense, little thirst, eyes heavy and painful, suffused with tears, and impatient of light. He was bled 16 or 18 oz.—gave a cathartic of jalap and calomel, ordered warm applications to the feet, cold to the head, excluded light and noise, drinks sub-acid. 4th, Symptoms not improved by yesterday's depletion, a little easier after detracting the blood, but the evening exacerbation was more protracted, with some aberration of mind. Pulse 100, rather soft and floating, tongue inclining to brown, but thickly coated and moist, breath offensive, some nausea, headache, eyeballs tender and suffused with tears; took 12 oz. blood, which was not cupped, and had little buff, crassamentum tender and dark coloured: gave an emetic and the saline mixture after the operation, epispastic to the neck, warmth to feet, cool water to the head, drinks as above, &c. 5th. Symptoms more alarming, tongue more brown not so moist, teeth and gums covered with a brown crust, great prostration of strength, coma, and low delirium; articulation greatly impaired, as well as respiration, pulse 112 and small, the countenance sallow and greatly depressed, evacuations from the bowels dark and very offensive. Gave 12 grains of calomel to be worked off with castor oil; then a liberal use of the effervescing mixture, yest, decoction of the bark acidulated with sulphur. acid; sponge the surface with cold water and vinegar. 6th, No relief, symptoms very unpromising, stomach very irritable, vomiting frequent, the contents thrown up dark and offensive, stools frequent and of the same complexion, is comatose and swallows with difficulty, adnata of the eye yellow, and pupil dilated, small vesicles appear behind the ears and on the sides of the neck, filled with a yellow serum, petechiæ appear on the legs, while a dusky yellowness pervades the whole surface. Treatment: Purge of rhubarb and calomel—after the operation, a Dover's powder combined with camphor; antiseptics as yesterday, with the addition of wine.

7th. 9 o'clock A. M. patient sinking into the arms of death, stools involuntary, black and uncommonly offensive; the ejections from the stomach black, resembling the dregs of the coffee-pot, or what is thrown from the stomach in yellow fever. The pulse is small, rapid, and intermitting, the vesicles about the head and neck have greatly extended, some of them on the neck and upper part of the chest, contain from one to two teaspoonfuls of a deep yellow serum, resembling the blisters that precede or accompany gangrenes; the petechiæ on the legs are more numerous and of a livid complexion; the yellowness of the skin has increased, patient senseless, unable to swallow, breathes with difficulty. Died 4 o'clock, P. M. in a highly putrid state.

It is worthy of remark, that four others of Mr. Randall's family were labouring under fever at the same time: their cases assumed no unusual type, and yielded to ordinary remedies. Several other families in the same neighbourhood were down with fever, and a son of the Rev. Benajah Corp, aged 21, died on the 14th day, with all the symptoms of compressed brain. The fever was brought into the neighbourhood by a young man from Onandago county, who came from a place where it prevailed, and sickened immediately on his arrival; no other cause could be assigned or detected; no one had the fever except those that had been among the sick. Several instances of this kind I have noted down where the fever has been brought into my district, by strangers coming from sickly places, first imparting it to those who had the care of them, and then by contact it has spread from family to family, and from neighourhood to neighbourhood.

The fever prevailed very extensively in the summer of 1803, and as I believe from the cause above stated: congestions of the brain, lungs, and abdominal viscera, were common attendants this season; and several died apparently from phrenitis, terminating in an effusion of the brain; many from hemorrhages of the bowels; these discharges of blood from the bowels took place in every instance after the subsidence of pyrexia, and while the patient was apparently in a state of convalescence. Those that survived the hemorrhage (which most of them did) had a rapid recovery.

Mr. Wm. Hurd (a brother-in-law of mine) sickened with the prevailing epidemic on the 2nd of May 1803; on the 7th his fever left him, on the 8th, he was quite comfortable, on the 9th he had an appetite and walked out, and imprudently set himself down on the bank of the creek—the air was cold and damp. In the evening he complained of severe headache, great weariness, was seized with a protracted chill, pulse small and at 120; violent reaction ensued, delirium came on, tongue became dry and soon brown; he passed on rapidly to death, in spite of every effort to save him, expiring on the 9th day after the relapse.

His case was strikingly analagous to Randall's, except that the yellow vescicles and petechiæ were wanting.

There was one symptom, and which might be considered as rather premonitory than otherwise, universally present this year, (1803) which I have repeatedly noticed before and subsequently, and one which I do not recollect of seeing noticed by any writer. It was a certain diagnosis of fever, and by it I have been enabled to predict the certainty of fever before the patient was in the least aware of his danger, or hardly considered himself indisposed. This was a stiffness and aching sensation of the muscles in the back part of the neck. This sensation has generally made its appearance several days previously to the usual symptoms of fever.

Have you noticed this symptom in your practice?

Thus, my dear sir, I have witnessed the various modifications of fever, from the mildest remittent, or the most simple inflammatory, to that of a very malignant type, arising from the same cause in the same family, and at the same time. The modifying cause may sometimes be detected, but it more usually eludes investigation.

I am certain that the decomposition of dead organized matter, whether it be animal or vegetable, or both combined, when acted upon by heat and moisture, produces a poison, (miasm if you please) which is the common exciting cause of fever; and that this poison, whatever it may be, diffuses itself over the whole system, deranging its various functions. With Fordyce, I believe that fever is a " disease of the whole system, in every kind of sense," and that the pathology of Ploucquet, Blutterburk, Broussais, &c. are founded in error, having mistaken the effect for the cause. In the treatment of fever, the practical physician cannot be shackled with any system of pathology, but he will treat it as he finds it, viewing it as an effort of nature to resist some hurtful impression, or remove from the body the morbid excitement; he will watch most vigilantly the several functions, relieving oppressed ones, and thereby preserving the integrity of structure. At times he must lessen the too great excitement of one organ, while he removes the torpor of another. He invites the blood to a cold and constricted surface, thereby relieving the oppression and congestion of the vital viscera, &c.

ART. V. A *Dissertation on* ERGOT, *read before the Essex District Medical Society, New-Jersey, March* 1825. By DR. JOHN WARD, of Newark, N. J.

IT is now nearly six years since I commenced the use of this article, during which time I have given it sixty or seventy times, and excepting in one case, it has fully answered my expectations, by producing powerful uterine contractions in fifteen or twenty minutes after its administration. Its primary action I conclude is on the stomach, for I have often observed a convulsive motion resembling hiccup, with an expulsion of wind upward, follow its exhibition in five or ten minutes, after which in some cases a rigor resembling an ague was perceptible. A powerful and almost unceasing contraction of the womb then takes place, and continues until the child is expelled.

The contraction of the womb has in some cases been so powerful, that I believe a laceration of the perineum would have taken place, unless I had prevented it by counter pressure. In all the cases in which I have given it, unless the child was expelled very soon after the powerful contractions came on, it suffered very much, and would lie for some time without breathing.

A lady of my acquaintance, who formerly lived in this town, and whom I attended in her three former labours, which were natural, lately informed me that in her last labour her membranes were ruptured without pain. She sent for her physician, who lived four or five miles distant. He came early in the morning, and remained with her until 3 o'clock P. M. During this time she had very little pain, and he being anxious to return, gave her some tea, which he prepared, (no doubt from ergot,) and in a few minutes her pains became violent, and continued so, for three-quarters of an hour. Her distress, she said, was almost insupportable. The child was born dead, and she was not able to turn herself in bed for four or five days. From my own observations, with regard to the effects of ergot, as well as from other correct sources of information, I am led to conclude, that in most cases after giving it, unless the child is expelled in forty minutes after the powerful contractions come on, it will be born dead. There may be cases where the woman is so much exhausted from the long continuance of the labour, or from hemorrhage, that the uterine fibres have almost ceased to act: the ergot in these cases may not produce stronger pains than are really necessary for the safety of the mother or child; but in general, if the woman's strength is not impaired, and the ergot is given, and the powerful contractions come on, which I believe they will forty-nine times out of fifty, if the child is not expelled in forty minutes, it will be lost. Death is most probably occasioned by the constant and strong pressure of the womb against the child, funis, and placenta, thereby interrupting the circulation. If such results follow the use of ergot, the conclusion must irresistibly be drawn, that it is a powerful and dangerous medicine, and that its specific action is on the muscular fibres of the grand uterus. The lives of many children have no doubt been lost by the untimely or injudicious administration of this article, and consequently many and strong prejudices have arisen against the use of it. I have lately conversed with two eminent physicians in a neighbouring city on the propriety of its use. One declaring his abhorrence of the article, said it ought never to be used. The other said without reserve that he considered it a valuable medicine in parturition, and that it was the best forceps he could use. But, notwithstanding such contradictory opinions, and notwithstanding the powerful effects which it produces on the gravid uterus, I am still of opinion that it may be given with safety and advantage in many cases.

The directions for its use must be founded on its unequivocal operative effect in increasing uterine contraction. This being acknowledged, I shall first state some circumstances which will forbid its employment, and then give the indications for its use.

First. Ergot ought never be given until the os uteri is completely dilated, excepting in one or two cases, which I shall mention hereafter. The process of labour is ordinarily a natural one; and so long as there is no interruption or hazardous deviation in this process, although it proceed ever so slowly, artificial interference is highly improper and unjustifiable.

Secondly. It ought never be given in cases of impaction, or where there is a disproportion between the head and pelvis. If the head of the child appears to be wedged in the pelvis, so that the natural pains have but little effect on it, and you perceive a soft tumour formed, or forming on the presenting part of the head, although the os uteri may be dilated, the probability is that the child will die before it is expelled, if ergot is given. In such cases, if the natural pains will not effect delivery, it will be better to extract with the forceps. It is almost impossible to lay down any fixed rule in these cases with regard to the use of ergot. Very much must depend on the judgment of the accoucheur. There, no doubt will be cases, where in consequence of the rigidity of the os uteri, the labour has been long protracted, and the woman's strength is so much exhausted, that the pains have but little or no effect in advancing the child, and yet the head may not be so firmly wedged in the pelvis as to prevent expulsion, if the pains were strong. In these cases I suppose the ergot may be given, but it will be more safe to wait until the child is far advanced, so that the perineal tumour is fully formed. But in all cases where the labour is protracted by any unnatural impediment, whether it be owing to mal-conformation of the mother or child, to attempt to overcome the difficulty by increasing the muscular action of the womb, would in all probability be unavailing, and always highly dangerous and improper; dangerous not only to the child, but also to the mother, for a rupture of the uterus might take place, a circumstance always to be dreaded.

Thirdly. I need scarcely mention that it would be highly improper to give the ergot in all preternatural presentations.

excepting breech and footling cases. Should the presentation of the child be such as to render it necessary to alter its position, it is certain that the uterine relaxation is highly necessary to facilitate the operation.

Notwithstanding the above precautions, there are some cases in which the ergot may be advantageously used, and, I should think, be a powerful means in saving the life of the parent.

First. In alarming uterine hemorrhages, which sometimes take place before delivery; whether it takes place in consequence of a detachment of some portion of the placenta, it being attached to the fundus uteri, or whether it be owing to a separation of its attachment over the orifice of the uterus. In the former of these occurrences, I have no doubt the ergot would be beneficial. The hemorrhage in this case frequently takes place without pain, and sometimes continues alarming until pains come on, which generally put a period to the discharge. In these alarming cases the life of the mother is principally to be regarded. If the hemorrhage continues profuse without pain, her strength will soon be exhausted, and she die undelivered. Under such circumstances as these, I should recommend the use of ergot, whether the womb is dilated or not. With regard to the latter occurrence, where the placenta is attached over the os uteri, we know that an alarming hemorrhage will take place before delivery, for the womb cannot be dilated without separating the placenta from its attachment, and the more speedily delivery is accomplished, after this comes on, the greater will be the chance of the mother's surviving. I know it is recommended in such cases to dilate the os uteri, artificially turn the child, and deliver by the feet. If this operation is dexterously performed before the woman's strength is much exhausted, she may survive; but most of the cases which have come within my knowledge or hearing, have terminated fatally. This probably has been in consequence of delay. The hemorrhage generally commences without pain in the latter months of pregnancy, before her expected period has arrived. The common means to check it are made use of; such as rest, cold applications, &c. These may prove beneficial for a while, but the hemorrhage will return and return, and perhaps each successive time without pain. Manual assistance is generally delayed until her strength is so much exhausted, that she sinks oftentimes during the operation, or in a few minutes after. In these alarming and almost desperate cases, would it not be better to give the ergot, and produce pain before the hemorrhage has so prostrated the powers of life, that neither the ergot nor manual assistance will save her. Gentlemen of the faculty, I suggest the idea for your consideration; but should a case of this kind fall under my care, I would early give the ergot, and after pain was produced, render such manual assistance in dilating the os uteri as might be necessary.

Secondly. The ergot is indicated, and may be given to those females that are subject to hemorrhage immediately after the expulsion of the placenta. Some women are peculiarly liable to this occurrence. Several cases of this kind have come under my observation, and in one female it occurred three times successively after the expulsion of the placenta. These cases are always troublesome, and attended with great danger. The cause of this hemorrhage must be a want of contraction in the muscular fibres of the womb, and I think it would be proper to give the ergot a few minutes before the child is expelled.

Thirdly. In the early stages of pregnancy, when a profuse hemorrhage comes on and abortion appears to be inevitable, and the ovum is not expelled for want of strong pains, I think the ergot might be advantageously given. Cases of this kind frequently occur in practice, and they become alarming and dangerous in proportion to the violence of the hemorrhage and the absence of pain. The strength of the patient is soon prostrated, and if she survives, it will be several weeks before she is restored to her usual health.

Fourthly. In restricting the use of ergot in preternatural presentations. I excepted breech and footling cases. Here it is well known to those who are conversant with cases of this kind, that children are sometimes lost in spite of all our efforts to save them, and generally for want of quick and powerful pains after the body of the child is expelled. If the head is retained a few minutes in this situation, with the funis compressed, and the circulation interrupted, the child will be lost, and it is not in our power to extract it without pain, unless the head is small and the pelvis capacious. A footling case I consider more dangerous to the child than a breech presentation, because the os uteri and external parts will not be so completely dilated in the former as in the latter case, and of course the head will be longer retained, and will require more and stronger pains to expel it. In breech cases I believe it would be advisable to give the ergot after the os uteri is fully dilated, and before the breech of the child is expelled, and in footling cases before the feet are far advanced.

Fifthly. The ergot may be advantageously given in all cases of arrest where the head of the child has descended into the pelvis, the os uteri is dilated, and the external parts appear to be relaxed, but for want of pains it is not expelled. Many cases of this kind have come under my observation, where the pains have been strong and forcing, until the os uteri was dilated, and the head had descended into the pelvis, at which time, although the woman's strength was not at all impaired, they would cease or become so feeble that the child would be retained until the ergot was given, or it was extracted with the forceps. Before the use of ergot was known, in one case of this kind, I waited twelve hours for pains to expel it. I then applied the forceps successfully, and was afterwards censured by the patient for waiting so long before I relieved her. In these cases, which not unfrequently occur, especially with women who have had many children, I think it will be far better to give the ergot, than to keep the patient restless and uneasy for hours waiting for stronger pains.

Sixthly. There is another alarming and dreadful disease to which pregnant women are liable, and in which I think ergot may be serviceable. I mean puerperal convulsions which take place before delivery. These convulsions sometimes come on suddenly before any symptom of labour has appeared. At other times, they come on in the course of the labour. In either case, large and repeated bleedings will be necessary, but the sooner the woman can be safely delivered of the child, the less liable will they be to return, and I believe they always do return until delivery is accomplished, and sometimes afterwards. I have seen them come on at seven months, and at the full period of nine months without any preceding symptoms of labour. In both cases the convulsions continued until the women were delivered. In the former case they continued twelve hours with a convulsion every hour before any labour pains were perceivable. After that period she was delivered, and had no return of them. In the latter case the convulsions returned without any pains or dilation of the womb, but not so frequently as in the former case, and continued forty-eight hours. She was then delivered, and although she had no more convulsions, she died the fourth day afterwards. I mention these cases to show the length of time that puerperal convulsions may continue without any apparent labour pains. If the ergot in these dreadful cases will produce uterine contractions and shorten the disease, it certainly ought be given. I acknowledge that I have had no experience of the beneficial effects of ergot in this disease, and therefore cannot confidently recommend it, but should another case of this kind fall under my care, I would give it without hesitation after copious bleeding, and I have very little doubt but that it would concentrate all the misplaced pains upon the uterus, and restore it to its proper action.

Seventhly. Ergot may be given with advantage when the funis umbilicalis descends before the head of the child. This I believe is not a frequent occurrence. During a practice of near thirty years, I have never had but six cases. Four of these terminated fatally to the child, in consequence of the funis being too long compressed after the head had descended into the pelvis. I have never found any effectual mode of returning the funis, and retaining it until the head was expelled, and I do not think it is practicable. Some recommend turning the child, and delivering by the feet. This is not practicable after the head has descended into the pelvis, and I think not advisable in any stage of the labour, for it would be a painful operation to the mother, and afford but a small prospect of saving the child. It the first case alluded to above, the child was born alive in consequence of the small size of the head, the circulation being interrupted only during the pains. The last was saved, I believe, by the administration of ergot. When I discovered the funis before the head of the child, the membranes were ruptured, the pains slow and lingering, and the os uteri nearly dilated. I immediately gave twelve grains of ergot. The pains soon became strong and frequent, and continued so about ten or twelve minutes, when the child was expelled alive. The ergot I think ought to be given as soon as the os uteri is fully dilated, that the pains may become strong and frequent, while the head is passing through the pelvis; during which time the circulation in the funis is entirely interrupted, unless the head is very small, and the pelvis capacious. It may not be amiss to observe, that if no pulsation is discovered in the cord during the examination per vaginam, we may be certain that the child is dead, and must be contented with permitting the labour to proceed as if the funis had not descended before the head.

ART. VI. *Case of* INFLAMMATION *of the* THECA VERTEBRALIS. By J. KEARNY RODGERS, M. D. *Surgeon of the New-York Hospital, and the New-York Eye Infirmary.*

——— BROWN, a coloured seaman, aged 25 years, was admitted into the New-York Hospital, April 19th, 1825.

About a week previous to his admission, he had been pushed, and fell backward over a bedstead, and he now complained of pain in the back, more particularly in the lumbar region of the right side. There was nothing apparently urgent in his case; but he attracted the more attention, on being received into his ward, from his gait and general manner, which induced the supposition of his being intoxicated. To questions on this subject, he uniformly replied, that he had taken but a single glass of spirits (about 2 oz.) that morning. He complained of being heavy with sleep, and slept several hours immediately after his admission.

He had no pain, except in the loins, and that not very severe, nor much aggravated by pressure. His respiration was slow; pulse full, frequent, and rather hard; tongue slightly furred; bowels costive. The sclerotic of the eye had a deep yellow tinge.

He took that afternoon, a purgative of sulph. magnes. 1 oz. and antim. tart. 1 gr.

20th. His medicine has operated freely. At noon I found his pain was increased, with a full, frequent, and hard pulse. Skin, somewhat heated. He was ordered to be bled to ℥xx. and to take small doses of antim. tart. 7. P. M. The pain was relieved by the venesection, and the pulse reduced in fulness and frequency.

21st. Pain in the back again very severe. The pulse has risen. Fiat. v. s. ad xx. oz. Applic. cucurb. cruent ad lumbos. Contin. remedia.

22d. All the symptoms alleviated. Pulse soft and slow. Tongue moist, though slightly furred. Has but little pain. The blood taken yesterday is highly buffed and cupped. Cont. Rem.

23d. Patient makes no complaint, except of a slight soreness in the loins.

24th. Complains of chilliness, and considerable pain in the back. Pulse small, feeble, and frequent. Ordered to take warm catmint tea, to have sinapisms to the feet, and take aq. ammon acet. ½ oz. with tinc. opii gtt. L. At night, took pulv. Doveri gr. x. pulv. antim. gr. iii. M.

25th. Symptoms as yesterday, with alternate flushes and chills. Tongue dry and furred; skin dry and harsh; bowels freely open; discharge of urine free; has great anxiety; examined the spine and all the abdominal region, but percussion does not increase his pain.

26th. Has violent delirium, but not the least fulness of the vessels of the head, or unusual throbbing of the temporal arteries. Respiration very anxious; abdominal muscles very tense; legs drawn up; skin cool and dry; yellowness of the eyes increased.

In the course of this day he died.

Examination, about sixteen hours after death.

Surface of the body exhibited no unusual appearance.

Abdominal viscera, all of which were carefully examined, were sound. No congestion in any of the organs. Bowels distended with flatus.

Thoracic viscera, remarkably free from any diseased appearance.

Cavity of the cranium. The brain was firm. Very little effusion between the pia mater and tunica arachnoides. The ventricles contained about two drachms of serous fluid. The vessels under the dura mater, at the foramen magnum, appeared very numerous, and filled with blood.

Cavity of the spine. On cutting through the muscles, for the purpose of getting at this cavity, the right lumbar mass had the appearance of being slightly bruised. The dura mater was very highly inflamed. Pia mater appeared natural. Vessels of the medulla spinalis but little affected.

From this man's admission into the Hospital, to the 23d of the month, I saw nothing in his case, except what might naturally arise from contusion, the consequence of the fall. The pain in his back at times seemed out of all proportion to the other symptoms, and at this I was the more surprised, as persons of his colour do not often express their sufferings in strong terms, unless other symptoms are present, which of themselves would give the medical man a correct idea of his patient's condition. At the latter date, he had so far recovered, that he considered himself well.

On the 24th, there was great anxiety, which was strongly marked in his countenance; this was increased on the following day, and on the 26th there was violent delirium, for which I could not account, by reference to the previous symptoms.

For more than twenty-four hours before his death, I was convinced that event would take place, but my opinion was formed more from the aspect of his countenance, than from any other evidence of disease; and it strongly reminded me of that state of yellow fever, where a glance at the patient's face does more towards forming the physician's prognosis, than all the collective symptoms.

ART. VII. AN *attempt to ascertain the value of the* VACCINAL VIRUS, *as a means of lessening the susceptibility to variolous diseases, with remarks on the most probable origin and nature of the small-pox.* Read before the County Medical Society of New-York, April 11, 1825; by FELIX PASCALIS, M. D., Fellow of the College of Physicians and Surgeons, &c.

Nec pluribus impar.

TWENTY-FIVE years have elapsed since the process of vaccination was first successfully employed in this part of the new world, as a preservative against the small-pox. Its having already been approved of by several European governments, which successively adopted it, concurred to place it beyond the control of prejudice or of individual opposition; indeed, it may justly be said, that the unanimous opinion of the medical and civil authorities have long since enjoined it upon all civilized nations. The public confidence in this prophylactic has thus far never been shaken, because no application of the vaccinal virus has been made in the way of experiment since the period of its introduction, and afterwards tested by the *artificial* small-pox, without its virtues being fully acknowledged. On the other hand, the few exceptions noticed from year to year in the general reports of Tennerian institutions, were always brought forward with satisfactory explanations of their occurrence. Among the few last opponents of this admirable discovery, there were simply doubting physicians, and others, whose strongest argument against vaccination was, that its *constitutional influence must wear out by age;* meaning, either that it could not be depended upon in the human system, but for a certain period of years, or that the virus itself, after circulating through a great number of persons, becomes inoperative or inert, and should be renewed from the animal which first furnished it. Nothing can furnish stronger evidence of the value of this beneficial process, than a reference to the bills of mortality, in the dense population of London and Paris. Philanthropic minds have, in consequence, rejoiced, and sincerely congratulated our profession on the subjugation of one of the most terrible and loathsome diseases.

Before I proceed in my investigation, I must say, that during the long period just mentioned of the established success of vaccination, a few exceptions have occurred which have given just cause for public alarm. These were partial or general epidemic attacks of the small-pox in some of our populous cities, as Philadelphia in 1802 and 1823, Baltimore in 1822, New-York in 1815 and 1821, besides other seaport towns, and the inland cities of Lancaster, in Pennsylvania, and Albany the seat of government of this State. Nor are there many capitals of Europe which have been more fortunate, or more exempt from such visitations. That of Norwich in 1819, as described by Sir John Cross, was appalling by its mortality. Other epidemics described by Dr. Monroe, and Mr. Hennen, and by Dr. Thompson of Edinburgh, during the succeeding years, were also very severe, and like our last epidemic, were attended by other kinds of *modified variola.* A like prevalence has also taken place in France, the authentic accounts of which from Marseilles and Bordeaux are in our possession. In each of these recorded and recent occurrences, some kind of varicella, or other modified form, has simultaneously prevailed, such as the *chicken-pox*, the *swine-pox*, and that which has been called varioloid. Of the appearance of the two first with the small-pox, we have the following documents. 1st, A report drawn by order of our medical society, and published in 1816. 2d, A report to the Royal Medical Society of Bordeaux in 1822. 3d, A very interesting narrative of the epidemic in Albany, 1824, by Lewis C. Beck, M. D.* Of the last form of mitigated variola, we shall hereafter give sufficient documents.

It has been also satisfactorily proved, that with whatever aggravated symptoms the small-pox has broken out, it was, with hardly an exception, among subjects unprotected by previous vaccination, or by inoculation, while the accessory variolous disease always obtained among a great proportion of individuals who had been subjected to either one or the other of these processes.

These events have of course placed the preservative power of the kine-pox in a very different point of view from that with which we heretofore have regarded it, and even contended for its universal adoption. We have been in a great measure discouraged, from the fact that by a fair retrospect since the year 1809, to this time, it appears that the proportion of cases of small-pox, succeeding vaccination, received and treated in a London hospital, has been at least as one to three and a half! [Vide G. Gregory.]

There are many who have supposed that the varioloid after vaccination, and the chicken-pox, were diseases different from the small-pox, and not at all to be controlled by it. Others perfectly versed in the etiology of both kine-pox and *variola*, have confined the influence of the former in the constitution to the mitigation of the inflammatory symptoms of the latter.† A few European authorities have contended that the varioloid of our days could not have existed before the cow-pox, like the chicken-pox and swine-pox, two sorts of varicella anciently known and analogous, and that there could be no hesitation in recognising the varioloid as the swine-pox, instead of being a modification of the small-pox.*

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* New-York Medical and Physical Journal, No. 13.

† Vid. G. Gregory, Physician to the Hospital of St. Pancras, London.

Setting aside, therefore, all hypotheses, and the opinion also of the degeneracy of the properties of the vaccine virus by age, let us examine whether our difficulties, and the mystery of the Jennerian prophylactic, are not to be accounted for by the twofold character which appertains to the small-pox, viz. that of an *artificial*, and that of an *epidemic* disease. This has never been adverted to in relation to the influence of vaccination.

A few questions on the nature of the small-pox, in order to elucidate its adventitious epidemic form, and distinguish it from that which, by our instrumentality, can be renewed at pleasure, are at present indispensably requisite.

1st. Is the frequent revival of the small-pox, or its continuation in populous countries, governed only by the common laws of contagion?

2d. If this fomes can long remain latent and inert, can it ever be destructible during any period of time?

3d. Would it not be rational to suppose that the *variola*, like many diseases of a malignant or pestilential nature, originates from certain combinations of animal effluvia, such as those that are ascertained to generate febrile exanthematous diseases, &c.?

None of these problematic questions have ever been resolved. The affirmative of the first, which during so many ages, has been implicitly believed, is no doubt the most unphilosophical. The introduction of the small-pox by the *Saracens*, who had received it from the natives of Arabia, when they invaded the Christian states on the Mediterranean coasts of Europe, twelve or thirteen hundred years ago, is not a proof that the same virus could not since have often been *home-engendered*, in other parts of the world, and then be imported into the bosom of any ancient or modern nation of either hemisphere. That belief, which so exclusively points out the torrid zone, or the birth-place of Mahomet, as the origin of the small-pox, appears absurd enough, when we afterwards find, that by its contagious nature, it has been propagated not only through the temperate regions, but has become congenial to the polar climate, where it once devastated the peninsula of Kamschatka, and the island of Iceland. From time immemorial, it moreover appears to have existed in the southernmost parts of Tartary and China, and to have proved a scourge to all races of men, in every latitude on the surface of the earth.

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* French Report to the Royal Medical Society of Bordeaux, by Mons. Dupuy, M. D.

The affirmative of the *second question*, implying the existence of the variolous virus during an indefinite length of time, and in a latent state, as must have been the case during the long and healthy known periods belonging to thirteen centuries, is an inference absolutely contrary to the laws of nature; if that poison was identically the same which had its origin in 570,* how could it have been diffused all over the world and exist to this day, unless its fomes is of a nature indestructible under every possible circumstance? (and then it would always prevail) yet time, we know, destroys every thing.

To the affirmative of the last question, we can easily yield our rational consent and belief. Never was the doctrine of spontaneous generation of diseases better evinced by observation, so well detected in atmospheric, gaseous, or impure exhalations from the earth, or from other sources, and illustrated by pneumatic philosophy, than it has been in our days all over the world.

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* The most ancient document proving the existence of the small-pox, is that of Bishop Marius, who died in 590, *anno* 570, *morbus validus variolæ italiam galliamque affecit.* (Vid. Valentin and Dezoteux traité del' inoculation, page 24.)

In relation to the small-pox, facts are not wanting to prove that its endemic prevalence has sometimes followed the most healthy seasons among dense populations; in consequence of disturbed graves, prostrated armies, fields of slaughter, and in harbours and ports from crowded battle ships. Whether it arises from local causes, or *from its dormant or latent fomes*, the small-pox constitutes an epidemic, whose primitive character possesses all the virulence and malignity belonging to the disease in any situation. It differs therefore from that *variola* which is artificially created by inoculation. The mild and benign march of this artificial small-pox, is not a matter of chance. The safety with which it runs its stages, had anciently caused its adoption among those Asiatic nations, who not only wished to provide for the preservation of life against the fatality of the natural or epidemic disease, but against the mutilation of the face and complexion. Besides the Georgians and Circassians, we find, that from time immemorial, the Chinese protected themselves in a like manner by the practice of inoculation. The English nation borrowed it from Turkey, at the commencement of the 18th century, and spread it in Europe and in their colonies, where it has been universally resorted to and encouraged by medical, as well as by civil authority during eighty years. The beneficial results of this practice, were and have been acknowledged and extolled in every point of view; and its mortality, compared to that of the natural or epidemic small-pox, was long ago ascertained in London to be as one death out of 100, is to one out of 5. It was ultimately superseded by the process of vaccination, which was expected to do away every possible source of the contagious poison of the small-pox; but the victorious prophylactic of Jenner was only tested against the artificial disease!

The variolous fomes can also exist under different and modified forms: these have been designated by the generic name of *varicellæ*; two of them, called the *chicken-pox* and the *swine-pox*, have been long since described by Heberden, Huxham, Vogel, and by Mons. Gandager de Foigni,* as specific diseases differing from the small-pox, especially because they are attended with no difficulty nor danger before nor after an attack of small-pox. This opinion has not always obtained in modern times. An American physician, Dr. Lewis C. Beck, of Albany, has among others satisfactorily proved the identity at least of the *varicella chicken-pox* with the small-pox. We have seen in this city, many successful attempts at communicating, by inoculation, the chicken-pox which prevailed with the small-pox during the autumn of 1815: and it is now admitted, that a case of varicella may be so far aggravated, as to be similar to an ordinary distinct and benign small-pox. We must then make one class of the *varicellæ*, or of the more or less modified variolous diseases. This mode of reasoning is so far proper and correct in the present investigation, since a new form of modified small-pox, or *varioloid*, has of late years much engaged the attention of medical observers in Scotland, in the United States, and in France, who have not hesitated to declare it a form of the small-pox, *modified by previous constitutional influence of the vaccine virus.*

This opinion has also gained great support among us, and we might infer, I think, that from some striking similarity between the two named *varicellæ*, this new form could be classed under the same generic name, as a third kind; perhaps the highest in the scale of *varicellæ*, and the nearest to the artificial *variola*; indeed a striking parallel can be made of the varioloid with the swine-pox, the first differing only in degree from the latter.* Again, as it will appear from facts hereafter to be related, the inoculated small-pox (or the artificial) is not a sufficient protection against the *epidemic*: I beg leave to offer the subjoined table of variolous diseases. arranged under two classes.

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* Vid. his Traité de l'Inoculation, 1775. p. 368.

† Correspondence and MSS. authority.

1 VARICELLÆ,	chicken-pox, swine-pox, varioloid,	2 VARIOLÆ,	artificial inoculated small-pox, epidemic small-pox.

It is with this scale in view that we can be better able to point out the variety on which the influence of the vaccine disease is expected to be partial or complete.

Of the two first, which are transient and do not induce mortality, it was never a desideratum to ascertain whether vaccination is a prophylactic. Experience has nevertheless shown that they are of rare occurrence among vaccinated subjects, unless they exist simultaneously with an epidemic small-pox, and become a modified form of the same, which all protected subjects still remain liable to receive. The third, which is now denominated the *varioloid*, it is contended, was not noticed before the existence of vaccination; but it is so far under the control of this preservative, that it is a part of our investigation to prove, that it is *epidemic small-pox* itself, perfectly modified by the beneficial influence of the vaccine disease.

There remains, therefore, but the inoculated variola or *artificial* small-pox, which could after long observation vindicate the efficient and preservative power of the vaccine virus, because in it there is not that greater proportion of malignity and virulence which in vaccinated subjects can still produce the varioloid.

To account for this pathological phenomenon in variola, we need but to advert to the variety of pustules by which it is so easy to prognosticate the favourable issue, or the fatality of the small-pox.

There are five sorts of variolous pustules, besides certain aggravated symptoms which are sometimes connected with them. We divide them into two orders; all possessing the character of small-pox, or of the variolous diseases, while those of the second order are restricted to the epidemic variola.*

FIRST ORDER.

No. 1. The most ordinary kind of pustule is the *cutaneous*; consisting of two varieties, the *distinct* and *confluent*: it rises from the cutis vera, and not from the epidermis, is of a spheroidal form, filling with a transparent lymph, but rapidly becoming purulent and of a yellowish colour; it flattens as it progresses, presenting a depressed point in the centre; if pricked, it discharges a white gelatinous fluid; if a too great number of these pustules are clustered in masses, and run into each other on the face and breast, they take the name and have all the danger of the *confluent* small-pox, and may be injurious to the eyes, features, and complexion, if not decidedly fatal.

No. 2. The *tubercular* pustule, rises also from the skin or cutis, and deeper than the preceding; it is smaller, elevated, opaque, hard, and encircled with redness; it is conical, and shews a vesicle on the apex, which fills and extends downwards, frequently drying before it is full. These pustules are unequal, and do not desquamate at their base; they stain the skin of a brown reddish colour, and are mixed with the cutaneous pustules, chiefly on the face, and on the hands and feet; they predominate in the artificial small-pox, and were seen in almost all cases of the varioloid of New-York; they give no difficulty in the treatment, nor prognosticate any danger.

No. 3. Is the *dry-pock*, thus called from its dryness, and the rapidity with which pus is formed. It is spherical, never flattened nor dimpled, nor is it in any case exposed to ruptures or oozing, nor attended with secondary eruption; it mixes with the cuticular pock, and is said to have appeared often in the varioloid of Philadelphia. The same is common in the artificial small-pox, especially on the limbs punctured by inoculation, and in the parts exposed to external air, it is also of the most benign nature.

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* Of the various authorities which can be consulted on this subject, I could not point out any more recent and satisfactory, than the treatise of Messrs. Dezoteux and Valentine on the small-pox, and also the Philadelphia Journal of Professor Chapman, No. 14. page 43

SECOND ORDER.

The following pustules being of a bad character, are the most dangerous, and occur in the epidemic variola only. They have been noticed by the above named writers, and by Dimsdale and Sutton in England.

No. 4. The *miliary* pustules, are preceded by turgidness, pain, and dark redness of the skin. They gradually appear like innumerable raised points, giving to a close touch of the hand, the harsh feeling of a piece of shagreen. So many pustules pressed against each other, are obviously checked in their progress to maturity. A dulness of perception, and a remarkable degree of torpor soon pervades all the functions of animal life. No care nor remedy can avert impending death on the 7th or 8th day, which leaves the body already gangrenous in proportion to the raising of the pustules, which may have taken place. I once saw a case of the kind effectually relieved by a spontaneous vesicular eruption over the miliary pustules, of large bags of lymph, which are known by the name of *pemphigus* or *pompholyx*. Not a few victims fell under it during the last epidemic of New-York. I foresaw the same fate in the person of a female aged 20 years, healthy and robust, whose fever was moderate, and the eruption rather similar to prickly heat, or to that of erysipelas.

No. 5. Is the *vesicular pustule*, deriving its name from the singularity of its formation in masses or clusters of small vesicles, which slowly proceed to maturity, and although they are seemingly confluent, do not communicate with each other, each forming a separate cell, from which no adhering bag can, by pricking, be emptied. The fluid is here clogged, and its maturation is slow and difficult. Hence that kind of eruption is full of danger, and frequently proves fatal, but, like the preceding, is seldom produced by the artificial small-pox. and we have never seen it in the varioloid.

No. 6. Is a distressing combination of symptoms incident to the disease, and not exclusively marked by any kind of pustules: it is marked by the formation of swellings of the legs, of glands and joints, of imposthumes in different parts of the body, even of caries of the bones, and of severe ophthalmiæ. These were observed and accurately described by Doctor Lewis Valentin, in the epidemic small-pox, which broke out in Norfolk, Portsmouth, and Princess Ann Counties in Virginia, in the year 1795. This excellent physician adds, that the inoculations which were resorted to in order to check the alarming progress of the calamity, participated in these malignant operations of the variolous poison, though chiefly among the blacks, and that he even saw infants with the collar bone projecting through the skin. The mortality was great, owing to the complication of abscesses, ulcers and tumours, which could not always be successfully managed by the general treatment of the small-pox; a similar complication of malignant symptoms took place in this city during the last epidemic, under the care of Dr. Samuel Akerly, in a pupil of the Deaf and Dumb Institution. The Doctor was obliged to open two large abcesses in both shoulder joints; another took place, which afterwards was discussed, and the boy recovered.

This statement of causes and effects, much abridged from what has been collected by the best judges in ancient and modern times, may satisfactorily demonstrate the greater malignity and virulence of the epidemic small-pox over the regular and ordinary course of the same disease, when excited by inoculation. It also evidently shows that the influence of the vaccine virus in the human system, rendering it unsusceptible to the latter, is not adequate to the repulsion of the former, when arrayed with all its most deadly symptoms. It can, however, modify the intensity of its operation; it divests it of its particular fœtor, of its secondary fever, of its dangerous pustules and inflammations, and transforms it into a perfect *varioloid*. This *secondary* attack is not altogether mysterious or incomprehensible, if we would reflect for a moment, and compare it with what takes place in a body labouring under a full and well marked attack of natural small-pox, it is, that when safely conducted to the last eruptive stage, and when all critical efforts seem to have been completed; still by the presence, and from the unavoidable absorption of a great number of pustules, the patient is subject to a secondary fever, to a secondary eruption and formation of pustules, which equally prolong his sufferings, and require the care and attention of his physician.

It may be expected that in concluding this investigation, we should acquaint our readers with the history of our late epidemic small-pox and varioloid, as they occurred during the years 1823 and 1824, in the cities of Philadelphia, New-York, and others, giving the results of mortality by the one, and the vaccinal failures by the other. Our present limits will not admit these interesting details, already authentically recorded in our Medical Journals. I shall select for the present purpose, the subjoined cases from my own observation, and that of others, such as will sufficiently illustrate the first and principal subject of investigation expressed in the title of this paper.

Cases which occurred in New-York during the epidemic small-pox of 1824.

Professor M'Neven informs us that a young gentleman, his pupil, caught the disease at a source which had affected a great many students of the college. He had been vaccinated in his infancy by the late Dr. Kissam; nevertheless he sickened with considerable violence: his case was, however, considered as the varioloid, with brisk red spots, and then pustules all over the body. Three more in the family who had been vaccinated by the same physician took the disease. On the sixth day, Dr. M. used a little of the lymph from a pustule on his student to inoculate a healthy boy with, in the family, who had neither been vaccinated nor inoculated, and this progressed regularly into a fine distinct and benign small-pox; in fine, the mother of the pupil, aged 40 years, who had been inoculated in her childhood and had the disease regularly, took it again on this occasion. It appears by this remarkable occurrence, that four cases of epidemic small-pox were all rendered mild and without danger by the influence of vaccination, and the other by that of the small-pox, which demonstrates that both possess the same degree of constitutional influence in relation to the epidemic small-pox.

A medical gentleman of this city experienced a violent attack of pneumonia, with a great determination to the head, and it became necessary to take repeatedly from him, a large quantity of blood. With this and other means, the patient's disorder was subdued, but he was left in a very reduced state, from which he was scarcely recovering, when yielding to an urgent professional call, he was carried to a house where the small-pox yet existed. He was shortly after laid up again with an alarming fever, until a considerable eruption broke out on his face and breast, which proved to be variolous pustules of a distinct and tubercular kind, and clustered together in very red spots, creating an intolerable degree of pain. This varioloid, which progressed tediously, was in this subject a secondary attack, he having had the inoculated small-pox at the age of ten years.

Two sisters, Germans, aged 18 and 20, born in Westphalia, and inoculated with the small-pox during their childhood, still bearing good scars on their arms, lived in the same family, industriously engaged in their capacity of house-servants, and where they experienced no other indisposition than that incident to a change of climate. They separated before the epidemic took place, and shortly after, at no great distance of time, sickened with the variola, each in their respective places of residence, in which not any such case had occurred. The oldest experienced a somewhat confluent varioloid; the second, had a violent fever which required venesection, accompanied with a mixed tubercular eruption. They both recovered on the 18th or 20th day of the disease. These cases are instances of the activity of the epidemic, equal in strangers as in natives, and in either kind of protection, by the inoculation or by the process of vaccination.

IV. We see in the following, a reciprocal and simultaneous influence of the two diseases upon each other; the one by exciting the operation of the vaccine virus, which was dormant in the subject, and the other by changing the epidemic variolous matter, into simple varioloid. From which it results, that both the vaccine disease and the *artificial* small-pox, can equally control the *epidemic variola.*

I was desired to vaccinate a little girl of 6 or 7 years of age, lately arrived from Louisiana, and I attempted to do it three times without the least effect, always at 6 or 7 days interval between each operation. Apprehending that my daily attendance upon several cases of small-pox, might be the means at least of exposing the child to an attack of the existing epidemic, I requested the parents to permit her to be inoculated, as all circumstances rendered this measure perfectly justifiable. I used fresh lymph, from a lad of 18 years of age, just labouring under a heavy confluent small-pox, yet a very hopeful case. At the usual time, the little girl sickened, and at the same time, a fine vaccine pustule with an areola, arose on the spot where the virus had been inserted. A few days after which, a second eruptive fever brought on a gradual varioloid eruption; the pustles were rather small, not numerous, and were generally of the dry and tubercular kinds: her recovery was rapid and perfect.

It must now be confessed that the march of the human mind towards the knowledge of the natural laws which govern one of the most formidable diseases, has been to this day restrained or retarded by an opinion, which, without any foundation, has obtained the belief and assent of all nations; to wit: that the small-pox is specifically *unique and sui generis*; the same which long ago was imported from Arabia. From this it was afterwards inferred, that by the universal adoption of the Jennerian process, the small-pox must be eventually eradicated from the surface of the earth. That this philanthropic and benevolent desire has not and cannot be realized, twenty-five years of experience has already shown us. This disease has not disappeared from a single populous district or nation, and uninterruptedly exists in all the largest cities of the world. Should it be granted, however, that by the vaccine process, millions of infecting sources of that virus have been suppressed, mortality by the small-pox greatly diminished, and that very few sweeping epidemics have occurred, it nevertheless appears certain that there remains some other sources of the disease, which the Jennerian prophylactic cannot reach, nor effectually control: or else there could not have been any epidemic small-pox in the midst of large populations, among whom the practice of vaccination is most rigidly enforced, nor such a number of vaccinal failures amounting even to thousands, been reported in a single populous city.* Such existing sources it is our duty to investigate: The following short attempt, I confess, may be deemed preposterous; but I inform my readers, that I cannot produce better arguments or proofs, than those that are furnished by logical analogy and analysis. To those to whom they may not appear satisfactory, I apologise, by holding the vaccine virus as an invaluable discovery, not only by its influence against the small-pox, as it has been explained and represented, but because it is a precious key to unlock the hidden and mysterious source of the small-pox, and which may also guard the human race against its epidemical visitations.

Nothing is found in the science of therapeutics that could, by analogy, be compared to the power or influence of the vaccine virus, except it be that of the small-pox itself, of which it may be the prophylactic. But as it has been proved a complete preservative against the artificial disease, and an incomplete one against the epidemic, there may be inferred from this unexpected result, a very conclusive analogy, which would hold good, if epizotic diseases when existing in epidemic form, could affect or endanger the human constitution; for then a bovine or vaccine epidemic, might at once, by priority, implant in our system an absolute insusceptibility to the human pustular pestilence. Now if analogy is in all speculative sciences, and especially in that of mathematics and algebra, the very rationale by which we may progress from the known to unknown proportions or quantities, the above alleged hypothesis is admissible by way of comparison, from that law which limits the power of the vaccine virus to a preservation against the artificial small-pox. Furthermore, as there are no three or four diseases that present more striking analogies than we find between cow-pox, the varicellæ, and variola, it is next to a theorem, that by the one which is perfectly known to us, we should come at the true nature of the other; then to its source, and perhaps to the periods or circumstances of its formation.

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* Vide Dr. Chapman's Journal of Medicine, &c. No. 14.

Proceeding from this analogy to another series of attributes appertaining to the cow-pox, we find that this virus is a diseased matter secreted from the body of a cow, or from the hoof of a horse, on the authority of Jenner himself, of the celebrated Dr. De Carro of Vienna, and of the Dr. Chevalier Valentin. Their researches on the subject should not be passed unnoticed, in treating of a contagious matter which has not only been traced from one animal to another, but has been also transferred to different species and from them again to the human subject, in whom the *equine* virus has shown the same effects and efficacy; nay, it has been so much confounded with the vaccinal matter in certain countries, that Dr. De Carro did not know but the *equine* matter had there superseded the *vaccine!* This fact being particularly interesting, we refer the reader for further details to the notes 6, 7, and 8 in the "*Notice Historique sur le Docteur Jenner.*

&c., Nancy, 1824. *Second edition, by Lewis Valentin, M. D. Knight, &c.*"

2. This virus being absorbed by the human body, after several days, a small quantity of lymph is assimilated to it, which forms one or more pustules, retaining the same powers as that which originally came from the cow.

3. And when the evolution of this virus is completed in the human constitution, it is, in every respect, as far altered or influenced by the operation, as it would have been by the inoculated or artificial small-pox; although both diseases may be diversified in point of duration, of nature, form, and quantity of pustules, it is also true that one only symptom is required for the efficiency of both, that is, eruptive fever; with this difference, that in the small-pox, it takes place at the commencement, until the eruption is formed, while in the vaccine disease, fever is manifested at a later period only. If now, we consider that no mineral nor vegetable poison is known to be absorbed by the human body, and that the power of absorption and reproduction are confined to animal matter and animal poisons, such as give rise to hydrophobia, syphilis, plica-polonica, herpes, psora, lepra, variola, kine-pox, and other contagious diseases; and that there is no kind of analogy between any two of those diseases, the two last excepted; it is not only justly inferred, but demonstrated, that the small-pox is an *animal virus*.

The next question would be to ascertain from what animal being it proceeds, whether from the brute creation, or from the human race, or indiscriminately from both. The double origin of the vaccine virus, to which we have already adverted as possibly of an *equine* nature, and also the singular pustular disease of the sheep kind, called the rot,* (in French le Claveau) might promise a clue, especially as the latter bears some imperfect resemblance to the human variola:

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* Med. Repos. N. S. vol. II. p. 228.

but let us drop any such conjecture, and by attending only to the fact of extensive epidemics having taken place in almost every populous nation and city, we may learn the general circumstances under which epidemic diseases are formed. One is the atmospheric constitution of seasons, of heat, and of moisture; the second, we designate as the miasmatic exhalations from the soil or other localities, such as marshy grounds, stagnant waters, and dried ponds, &c.; and lastly, the accidental conditions of dense assemblages of human beings.

The extensive inhabited regions which have sometimes been ravaged by pestilential fevers, as happened in the whole Roman empire under the two Justinians, in the 7th and 8th centuries, were certainly excited by an universally deleterious state of the atmosphere. The same cause presided and prevailed no doubt, in the 16th century, when all possible forms of influenza, catarrhs, and fatal *anginæ* ravaged all Europe, by the sweating sickness in England, by the sneezing sickness on the continent, and by the croup in Italy. But such universal causes have never been applicable to the epidemic small-pox; it never was simultaneous over extensive regions; it does not invade many populous towns or districts at the same time; it has always been successively and at different dates in winter, in summer, in frozen regions, and under the torrid zone, in dry and humid situations, and from pole to pole, a scourge to mankind, parcelling out its attacks amidst the joys and comforts of previous health, suddenly and unexpectedly diffusing its powers throughout all ages and classes of society.

The miasmatic exhalations of the earth have long been known to be the ordinary or accidental sources of a catalogue of endemic or epidemic diseases and plagues. The Hebrews had their Leprosis, the Greeks their Elephantiasis, the Polanders have their Plica Polonica, the Savoyards their Goitre, and the Italians their Malaria, &c.; and what a variety of fevers of a bad character are endemial in the vicinities of our great lakes and rivers! But not one defined or bad quality of land or soil has ever been observed to promote epidemics of small-pox more than another; no one race nor tribe of men, nor one climate, nor season, nor one latitude more than another; nor is there any exception in society or in the savage life, in their aliments or occupations, in the toils or hardships of labouring classes, or amidst the refined luxuries and comforts of the rich, in the humble huts of the poor or the gorgeous palaces of the great. And no age, in fine, can be said to be more congenial to or productive of this disease than another. Louis the XV. king of France, after the daily fatigues of hunting, experienced an attack of varicella, when 28 years of age, and 46 years after, he died of the most horrid and malignant attack of the small-pox.

The third condition or circumstance productive of general epidemics, and that only which has attended those of the small-pox, is unquestionably that of large and dense populations. Hence, it has always been hovering in camps, in fleets, and prisons; it is frequent in all commercial cities, and is never extinct in London, Paris, Lisbon, and Constantinople; this specific matter, it appears, is formed or aggravated by an animal or deleterious effluvium, which, passing from man to man, from breath to breath, gradually acquires its elementary intensity, by which a single particle or atom of it, similar to leaven, excites a general ferment of the whole lymph in the human fabric; but this terrible operation, which can so readily be averted or modified by the slight constitutional action of another animal virus, suggests to us that two concurring elements or causes, one remote in the living body, and which has not been eliminated from it, the other proximate, can, by the fortuitous accession and junction of impure animal effluvia, create the variolous poison with all its own attributes. This phenomenon appears neither so incomprehensible, nor so singular nor dreadful as that of *phthyriasis*. When the circulating lymph in the morbid state, and under some accessory influence of external heat, or filth, is brought to the last term of animal decomposition, and forms or creates a most horrid kind of vermine, which is rapidly increased by continually succeeding generations. issuing from all the hairy surfaces, from mucous membranes and from purulent pustules. If that trivial adage might be indulged in here, "To see is to believe," I might add, *Quæque ipse miserrima vidi.* History informs us, that the divine Plato, Herodes king of the Jews, the dictator Sylla, and Philip of Spain, all died of that shocking malady.

There cannot be much doubt that the small-pox is an animal poison, exclusively proceeding from human beings, and that when prevailing as an epidemic, it is of a recent and fresh formation; and since it could not be traced to atmospheric constitution, as we have already demonstrated, nor to miasmatic exhalations, or other deleterious qualities of the soil, we must conclude from a series of striking circumstances, that it is a compound and morbid formation from human effluvia; it must then be reasonable to suppose that extensive infecting and invisible currents of the kind, cannot have a long existence under the vicissitudes of seasons, and the variableness of winds and temperature, although they may be often renewed in camps, jails, ships, hospitals, and burying places, as well as in all dense assemblages of human beings.

Another and last remark in conclusion, relates to the contagion of the small-pox, which proves to be so much more active, diffusible, and transportable by intermediary vehicles, such as the effluvia from clothes and other materials, than any other. Epidemic fevers of a bad or malignant character continue still to excite great controversy among the learned, and the heads of government, respecting their contagious power. I would only propose a final question, which has been illustrated by the above investigation; whether the *contagious property* of any disease incident to mankind, can not be peremptorily decided; first, by its nature as an animal virus; secondly, by its being absorbed into the human system; and finally, by the conversion or assimilation of human lymph into a virus of the same nature, and capable of reproducing the same disease?

ART. VIII. *On* FISSURE *of the* RECTUM, *attended with constriction of the anus.* By ALEXANDER H. STEVENS, M.D. one of the surgeons of the New-York Hospital.

IN the Dictionaire des Sciences Medicales, article Fissure, and in the Journal Complementaire du Dictionaire, vol. 2d, Baron Boyer has described a disease of the rectum, which has not been noticed by any modern surgeon, except very obscurely by Sabatier in his Medicine Operatoire, and by L. Limonier in his Traité de la fistule a l'anus, published in 1689. He terms the disease "a fissure of the rectum, attended with constriction of the anus." He supposes that in consequence of hemorrhoids, or other causes of irritation about the anus, the sphincter is excited to violent action, by which, during the passage of hardened fæces, the mucous membrane at the lower part of the gut is torn longitudinally or parallel to the axis of the rectum; after such an accident, every passage of fæces, even if not hard, irritates the exposed surface, which by repeated irritation, becomes the seat of exquisite sensibility. The irritation thus excited keeps up, and augments the constriction of the sphincter, which reciprocally tears open the lips of the fissure. Such is Baron Boyer's beautiful pathology of a disease among the most painful to which human nature is subject. The remedy he proposes is as simple and certain as the pathology is beautiful. It is a complete division of the sphincter ani.

As this very distressing malady has, until very recently, been entirely overlooked by the English surgeons, and as it has not, so far as I know, been the subject of observation in this country, I shall offer a few remarks on the means of distinguishing it from other diseases with which it is liable to be confounded. The characteristic sign of fissure is a fixed pain in one point of circumference of the anus. On introducing the finger, which is always excessively painful to the patient, it is grasped very tightly by the sphincter, and a particular spot directly above the seat of the greatest pain in the anus is exquisitely tender to the touch. The greatest pain is not during the passage of the fæces, but a little time afterwards, and unlike the piles with which it is often confounded, it is not relieved by the horizontal position. The patient on the contrary, cannot lie down during the time of the greatest suffering.

The subject of the following case is a middle aged gentleman, whose sufferings are detailed by himself.

“ I have been for many years subject to the blind piles, but they have generally yielded in a few days to simple laxative medicines. Early in October last, I had an attack which I attributed to cold caught the night before and to costiveness. I had not the opportunity of taking the usual remedies for some days, and when I had recourse to them, I did not find the relief that I usually experienced from the use of them ; the piles were inflamed externally, but besides the pain from them, I found a constant uneasiness more internally, which became very painful while walking ; and I observed that I did not experience relief by remaining in a recumbent position. The pain continued to increase, and became excessive after walking a few hundred yards. I lived low, and took altogether a cooling diet. The external piles still continuing, (although not very much inflamed,) and the pain increasing, recourse was had to bleeding with leeches, which was frequently repeated, and afforded a little temporary relief. About the middle of January there was for two days a considerable spontaneous bleeding, which relieved me much, and I was so well for eight or ten days, that I thought the disease had left me ; it however again returned, and with all the previous symptoms ; again recourse was had to leeches, and after some time, all external inflammation disappeared, but the internal pain remained unabated, or rather increase
and seemed to proceed from one spot on the left side.
could not bear the introduction of an injection pipe.
stools were almost always painful, particularly if the
inclined to be costive, and were frequently tinged with
I was never entirely free from pain or uneasin
almost always about an hour after having been at

pain began to increase, (even without taking any exercise,) and continued excessive generally from four to seven hours. During these paroxysms, I could not lie down, and was obliged constantly to be changing my position.

"On the 26th April, I submitted to the operation, and afterwards never had any pain that I might not justly ascribe to the wound, and to the means used for the stoppage of an hemorrhage which occurred four or five days after the operation. On the 16th day I went out of the house, and now I consider myself completely free of the complaint, and the wound is nearly healed up."

Dr. F. U. Johnson, his physician, who procured the account for me, says, "I have little to add to Mr. S——'s faithful account of his own case, than that when he applied to me, I considered his disease a severe hemorrhoidal affection, and persevered for some time in the most approved remedies for that complaint, but without any permanent advantage to my patient, whose sufferings were so severe, and at the same time apparently so irremediable, as not a little to distress and perplex me. Under these circumstances I consulted you, and was relieved at finding you adopt the same opinion with regard to the nature of the complaint, and pursue with some additions, the same course I had before tried. His symptoms still continuing the same, and his sufferings unabated, you at length suggested the probability of their being kept up by a fissure and spasmodic constriction of the sphincter ani; but on examination no such fissure could at that time be discovered; in eight or ten days, however, a crack or fissure became distinctly visible on the left side of the anus, the seat of all his pain. You then proposed Boyer's operation; a complete division of the sphincter; this our patient agreed to, and after a consultation with Dr. Post, who readily came into our views, it was performed in the course of the fissure, with what success appears from the statement of Mr. S. himself."

The operation consisted in dividing the sphincter ani with a straight bistoury passed up the rectum, and dressing the wound with dry lint pressed into its cavity.

REVIEW.

Art. I. *Transactions of the Medical Society of the State of New-York, for the year 1825, together with the Annual Address, by Alexander Coventry, M. D. President of the Society.* Albany, 1825. 8vo. pp. 64.

In a previous number, we noticed the more important proceedings of the State Medical Society at its annual session; and we also presented to our readers, the eloquent and able address of its late President, Dr. Coventry. We should have deemed this sufficient, did we not believe that an examination of one of the documents contained in the appendix would be at once interesting and acceptable to the profession. The article to which we refer is the draft of an *Act further to amend the existing law regulating the medical profession.*

It will be recollected that the last law on this subject was passed in the year 1818, and between that time and the present, experience has shown that however valuable the enactments in this State are generally, yet they are chargeable with many imperfections and omissions. The attention of the State Medical Society was first drawn to this subject in 1822, in consequence of a memorial which had been presented to the legislature by certain professional gentlemen in the county of Ontario. Having been referred to the Standing Committee on Literature, of which G. C. Verplanck, Esq. was Chairman, it was by him communicated to the society, and the result of the reference was, the draft of an emendatory law. This was reported to the assembly, but no further steps were taken on it during the session. In 1823, a similar law was again proposed, but rejected; and an application in 1824, proved equally unsuccessful.

We need hardly state to those who are in the least conversant with legislative proceedings, that these repeated rejections, or rather refusals to act on the subject, are far from being a positive indication of the deliberate sense of the representatives of our State. The hurry of business; the pressure of more leading or more local objects; the delay occasioned by the late period at which the State Medical Society convenes (late, we mean as to the introduction of bills) and the nature of the subject, disconnected as it is from political or party discussions; all have tended to prevent its receiving a proper share of attention.

At the commencement, however, of the present session of the legislature (1825) the prospects of its success were highly flattering. As in former years, so particularly in this, the draft received the unanimous approbation of the State Medical Society. The delegates composing that body and coming from every part of the State, appeared disposed to waive every topic that might tend to weaken the strong points of the bill; and after deliberately discussing each section, united in again presenting to the Legislature the *project* of a law, which is contained in the appendix above referred to. Its friends in that body were numerous and decided, and every thing promised a gratifying termination.

When, however, it was about to be called up in the Senate, a new obstacle, *as we are informed*, presented itself. It was urged that as the proposed law would materially alter the existing regulations concerning medical societies; and as the latter were corporate bodies, so in compliance with the general statute, a public notice during six weeks should have been given of the proposed amendments. This was sufficient to arrest all proceedings. We would speak of the objection with all due respect, but we must confess that we should as soon expect to have heard it offered against a law for the suppression of vice and immorality, or any other public statute. Though nominally an act to amend the law relative to medical societies, it is, in fact, an act to *regulate and improve the medical profession;* and until the present era of constitutional and legal scruples, has always been considered as such.

With a knowledge of this difficulty, it becomes those who are charged with the subject, to prevent its recurrence again impeding the progress of the proposed law. And at all events, however much the delay may be regretted, it still affords the members of the profession another year for discussing the subjects embraced in the amendments. It also enables them to witness renewed instances of the evils intended to be obviated, and thus we hope, it will produce increased and additional efforts to effect their removal. It is with the hope of drawing the serious attention of our brethren to the subject, that we submit this narrative, as preliminary to a notice of the proposed law.

It contains thirteen sections ; and the first is a repetition of the 20th section of the Act of 1813, which ordains that no person shall practice physic and surgery in this State without being regularly licensed, under a penalty of twenty-five dollars for each offence of which he may be convicted. But the *provisoes* of the old law are omitted in the proposed one. These are, first—that "no person practising without license, and not receiving any fee or reward for the same, shall be liable to the above penalty." This superfluous act of benevolence is so uncommon, and indeed so unnecessary at the present day, that it seemed hardly necessary to insert a statutory provision concerning it. But whatever may be thought of this, the second is the dangerous clause ; and under its broad license, great and irreparable mischief is constantly perpetrating. It is in the following words : "*Provided also*, that nothing in this act contained, shall be construed, to extend to debar any person from using or applying for the benefit of any sick person any *roots, bark, or herbs, the growth or produce of the United States.*"

We will remark in extenuation of the views of the Legislature which permitted this dangerous license, that our vegetable materia medica, some ten or fifteen years since, was far less understood than it is at present, and in particular, the power of its more active articles. But at this crisis, when Medical Botany has been ably and minutely investigated; when we understand how many important and powerful agents our native soil produces, surely the continuance of this proviso is a permission to warrant the ignorant and designing to use the most deleterious instruments with impunity. A bare catalogue is sufficient to demonstrate this. Among our native plants, are the different lobelias, the arums, cicuta, stramonium, ergot, tobacco. But this is not all. The words of the law certainly include naturalized as well as native plants; and we may thus add to the list, digitalis, henbane, opium, and a number of others. Is it accordant with the principles of justice and humanity, thus to let loose among the community, individuals the most ignorant and brutal; who, in the absence of an honest occupation, have seized on this for a temporary support, and who daily injure the health and tamper with the lives of our citizens? We put it in another point of view, to the *radical* reasoners amongst us, who are so anxious that all should pursue any and every business they may select, without restraint. You have by your laws directed a certain course and period of study as preliminary to the permission to practice physic and surgery. This you demand from all, whether young or old, rich or poor. Expense, both as to time and money, is required for its completion, and yet you will exempt none from its operation—except an illiterate quack, whom you authorize to administer the medicaments that nature has given you for better purposes, and with as little knowledge of the effects they are to produce, as the patients have, who are entrapped into their use. Surely this is not equality of rights. Is there then a more important or more desirable object to be presented to our legislature than the proposed repeal of this *permission*; a repeal merely, we repeat, for we do not urge a crusade against these pretenders. All that is desired, is that the law shall not patronise them in their doings, or throw around them the broad shield of its protection.

The 2d, 4th, and 5th sections are intended to obviate certain difficulties, and to correct some abuses that have occurred in the examination of students for their licenses. It has happened that a student rejected in one county, has immediately gone into another, and presenting his certificates of a regular course of study, has demanded an examination, and obtained a license to practise. This is prevented in the proposed law. Again, students have studied in one county, and have gone into another to be examined. The sections in question ordain that a student shall be examined before the Medical Society of the county in which he has studied, or before the State Medical Society, that if rejected by the County Medical Society, he may appeal to the State Society; that after a rejection by a County Medical Society, a second examination of the same individual cannot be held until after six months have expired; and finally, that if a student be rejected by the state censors, he shall not at any time thereafter be examined by a County Medical Society. All licences obtained contrary to these provisos, are declared null and void; and it is further enacted, that due notice of an examination shall be given to *all* the censors, and not to a bare quorum merely. We believe that experience fully sanctions the necessity and propriety of these enactments, and that their certain tendency will be to elevate the standard of professional acquirements.

The third section relates to physicians coming from other states or countries. We will quote the existing law concerning them, and then the proposed alteration. The 22d section of the act of 1813 requires that the individual shall be duly authorized to practise by the laws of the state or country, from whence he came, "having a diploma from a regular medical Society." The 4th section of the act of 1818 requires that he exhibit to the Medical Society of the county where he resides, sufficient proof that he has studied medicine four years, or in lieu of one of these years, has attended a full course of lectures. The amended law proposes, "that he exhibit satisfactory testimony of having attended a course of medical instruction as full and complete as that which is required in either of the medical colleges in the state;" or, in other words, that he must have attended *two* full courses of medical lectures.

The 6th, 7th, 8th, and 9th sections form part of a code of Medical Police, which it is now attempted for the first time to introduce into our statute book, but which, we believe, the wishes of the profession have long called for. Its leading provisions are as follows. On complaint in writing, before any County Medical Society, charging a practitioner "with having been guilty of infamous crimes, or habitual drunkenness, or of gross ignorance and incompetence," said society, after due notice to the accused, are authorized to investigate the subject—to compel the attendance of witnesses, and by the votes of two-thirds of its members, to suspend the delinquents from the practice of physic and surgery. An appeal may be taken up to the State Medical Society, and this latter body as a court of review are authorized either to annul or ratify the sentence. Provision is also made for a removal of the suspension after a proper period.

We shall not insult the understandings of our readers, by endeavouring to adduce reasons for the necessity of this measure, nor will we even allude to cases of daily occurrence, which would fully warrant the exercise of strong discipline. We assert without fear of contradiction, that the proposed amendments are in reality of greater importance to the community in general, than to the profession. It should also be recollected, that the other learned professions possess within themselves a power of removing or suspending their unworthy members, and we are yet to learn why in our own the same power may not with safety be vested. The medical societies under the present system possess no effective power to correct the abuses noticed above. They may expel the individual, and instead of regretting it, he will rejoice at being freed from the necessity of attending the meetings. He has still the power of practising, and while he possesses this, it is altogether unimportant to him whether any of his brethren will consult with him or not. We are well convinced that any enactments which like those contemplated above, can be held *in terrorem* over offenders, must tend to purify the profession.

The remaining sections need only a very brief notice. Section 10th permits a society to alter the time of its annual meeting after due notice has been given. The 11th section formally repeals such parts of the existing laws as are inconsistent with the present, whilst the 12th authorizes the substitution of the affidavit of a practitioner of medicine, as testimony of the term of study of a student.

The 13th and last section provides for the election of three state censors in each of the senatorial districts of this State; thus increasing the number from twelve to twenty-four. The *immediate* result of this will be to place a board within the convenient reach of any student, who is desirous of applying for a license. The *future* consequence, we trust, will be to abolish the licensing powers of the county societies. We know of no measure that appears better calculated to improve the style and character of examinations, than thus to form eight boards of censors. They should be enlarged, if found necesary, so as to contain ten, twelve, or more members; should meet semi-annually or quarterly in some central place, and should transact their business in a public manner. We venture to predict, that if this course was adopted, unqualified individuals would not be so ready to apply, as they are at present. Let it however be understood, that this is only a proposition of our own. The amendment merely contemplates the formation of censorial boards, in the different senatorial districts, and thus gives to students in *every* part of the state, the same privilege that those residing in the southern and eastern divisions have long enjoyed.

On a review of the objects comprised in the proposed law, we are fully justified, we think, in asserting that they are patriotic; designed rather to subserve the interests of the community, than to support or foster any particular part or portion of the profession. They will bear examination and investigation, and time while it adds weight to the necessity which calls for their adoption, will give strength to the arguments by which they have been enforced.

In these respects, it differs from *another act for the promotion of medical science*, whose unblest reputation extends from one end of the state to the other, and whose success is a subject of bitter taunt to every physician who applies for public purposes to the legislature. The purchase of the botanic garden by the State, and its *subsequent utility to the cause of medical science*, are known and appreciated by every citizen of information; while the transaction itself has done more than any other public act in our history, to impede the progress of applications on the part of the profession.

Here we might rest our notice, but we feel we should complete our object imperfectly did we did not briefly animadvert on a subject intimately connected with the foregoing. We refer to the legal qualifications for the degree of *Doctor of Medicine*. It is in vain to endeavour to improve the standard of the lesser honour, (the license, we mean) if that of the higher is frittered away and cheapened.

The laws concerning this degree are brief, and as we think, explicit. By the act "relative to the University," the Regents are invested with the right of conferring the degree of Doctor of Medicine on any person or persons whom they may deem worthy thereof, and such degree shall authorize the person on whom it is conferred, to practise physic and surgery. Under this provision, the Medical Colleges annually recommend to the Regents, such persons as they deem qualified. By the medical law of 1819, it is ordained that "no College of Physicians and Surgeons in this State shall confer a diploma for the degree of Doctor of medicine upon any student, until such student shall have fully complied with the requisitions of the first section of the act to amend the act to incorporate Medical Societies, for the purpose of regulating the practice of physic and surgery, passed April 20th, 1818, and shall also in addition thereto, have attended one complete course of lectures, delivered by each of the professors of such college." Now the requisitions of the act of 1818 are four years study, or in lieu of one year, attendance on a full course of lectures, and the attainment of the age of 21 years.

These are the legal enactments on the point in question, and the first, and indeed the only subject that is capable of doubt, is the commencing clause. In *point of fact*, no medical college can confer the degree of doctor of medicine. This power is solely with the Regents. What then is the meaning of it? We shall state what we know personally. The bill was introduced and carried through the legislature by a medical gentleman, who with his friends, intended it as a check on the profuse and indiscriminate recommendation for degrees by the Medical College of New-York. It was intended to raise the qualifications for the degree. He was probably not aware that the legal power of granting the degree was in the Regents, or if he did know it, believing that the latter would not abuse their powers, but that the former might, he drew the bill in its present form. It is at all events imperative on the colleges, and so it has always been understood. We say it without fear of contradiction, that there is no unbiassed man in the profession, who has not so construed it.

It was urged at a late meeting of the Regents, that the clause in question had no reference to them; that their powers were still unlimited, and that it was intended to prevent our literary colleges, and in particular, Columbia College, from granting the degree. Now as to the first, we remark that the powers of the Regents are still unlimited, so far that they can grant the degree to whom they please, but then the degree is honorary. If it be so understood, all objection ceases. If they choose to make a young man of eighteen years of age, a young man who has studied two years, or an individual who has no certificates of his time of study or his age, an M. D., be it so. No one can doubt its legality, however much its propriety may be questioned. But these cases are not presented. The persons brought forward, all preferred their claims as students of the medical college, and the diplomas issued, passed down and were presented by the officers of that college. Then we humbly contend they should be judged of according to the laws which govern the college.

The second objection is, however, the most extraordinary one. In 1819, the law on this subject was passed. Five years previous, (in 1814) Columbia College had voluntarily and formally abolished the medical department, and her medical professors had united themselves with the New-York College of Physicians and Surgeons. Was it then to be expected that she would ever attempt to grant the medical degree? In fact she never did. Again Union and Hamilton Colleges, we assert, have not the power in their charters of granting this honour; but even if they had the perfect and complete power, what purpose could be effected by it, or why should this law have been passed to check them? Their degrees would be merely *honorary*. The degrees of the Regents, on the recommendation of the colleges, are equivalent to a license; they give a right to practice—*to raise money from the liege subjects of the State*. We do not censure the Regents for being unacquainted with these facts, or for acting under the impression that the construction of the clause is such as is stated above. Many of them have been elected into the Regency since the law was passed, while few have paid much attention to the medical code of our State. There was one individual, however, (a Professor of the New-York College) from whom the suggestion may possibly have come, who was present as a spectator at the discussion, who professes himself intimately acquainted with the laws concerning the medical profession, and who *knew* that the act in question was never passed to combat such a windmill as the power of Columbia College to grant effective medical degrees, and yet to accomplish a temporary purpose, he was contented to be *at least* silent; to permit the whole system of medical law to be thrown into confusion, and practically to see the qualifications for a license made more ample, more important, more indicative of a proper medical education, than that of a doctor of medicine. What has he gained? what will he gain by this step? what will his college gain by it? Its honours already withering, need reviving. Its reputation already tottering, needs support. And it is not in the miserable pageant of some ten or twelve additional graduates, that the return of these is to be looked for.

While, however, a diversity of opinion on this subject exists among the Regents, we can only respectfully suggest one mode of securing proper legal qualifications in the candidates for the degree. Let proper application be made at the next session of the legislature, for a law directing the Regents in no case to confer the rank of doctor of medicine on a student of the medical colleges, until he shall have exhibited satisfactory proofs of having studied medicine three years, of having attended two full courses of lectures, and of being twenty-one years of age. Reserving at the same time, the powers now resident in the Regents, of conferring honorary degrees.

ART. II. *A Physiological Essay on Digestion*, BY NATHAN R. SMITH, M. D. *Professor of Anatomy and Physiology in the University of Vermont.* New-York. E. Bliss & E. White. 1825. 8vo. pp. 93.

THE object of this Essay is to give to the medical world a new theory of Digestion; a concise analytical view of which we shall endeavour to present to our readers. Before commencing it, however, it seems necessary to give a loose sketch of the present received opinions upon the subject, in order to show our author's objections to them.

The process of digestion as laid down by the best physiological writers of the present day, is simply this. The food while undergoing the operation of mastication, is thoroughly mixed with the salivary secretion. Upon reaching the stomach, it is exposed to the action of the gastric fluid, which by a peculiar solvent power, aided by the natural motions of the organ, converts the substances exposed to its action into a homogeneous mass, called chyme. Physiologists are not agreed as to the precise nature of this change, some considering it as purely chemical, the stomach aiding only so far as it furnishes a certain degree of heat, moisture, and motion; amongst these are Wilson Philip, and Magendie; whilst another class conceive that the vital powers of the organ are indispensably requisite to the production of this change. The chyme then passes into the duodenum, where it meets with the secretions of the pancreas and liver, which are supposed either to precipitate an opaque, white liquid, called chyle from the chyme, or to so modify it as to enable the lacteals to select and absorb this same milky fluid, as it slowly passes through the long track of intestines.

In commenting upon this theory, Dr. Smith maintains, that, in relation to the solvent properties of the gastric juice out of the stomach, the experiments of Cheselden, Reaumur, and Spallanzani, are loose and inconclusive, varying not only in the results obtained by the different individuals, but by the same individual in different experiments. The more recent experiments of Montegre made with all the care and accuracy of modern chemistry by no means correspond with those just referred to; indeed, of such a nature is the evidence drawn from them, as to convince that able experimental physiologist Magendie, that nothing like digestion has ever been carried on out of the stomach.

The erosion of the coats of the stomach after death, first noticed by Hunter, has always been considered as a strong proof of the powerfully solvent properties of the gastric juice. Dr. S. endeavours to do away the force of this evidence by a different explanation.

> "With regard to the first phenomena, it appears to me, that the advocates of the theory of solution are not aware of the dilemma to which they are reduced, in case it be admitted as an effect of the gastric juice. Magendie, in accounting for the inertness of the gastric juice out of the stomach, attributes it to the absence of certain circumstances, which cannot be accurately imitated. The principal of these are uniform heat and motion. They, it is obvious, are dependent upon vitality, and must cease with it. If, therefore, it be asserted by any, that this fluid acts thus upon the dead stomach, with an energy equal to that of the most powerful acids, it is certainly incumbent on them to exhibit its effects out of that organ, since there can be no reason why they should not be unequivocally demonstrable.

"These *post mortem* changes are, in a general way, accounted for, on the supposition that the organic functions, particularly those of the capillaries and absorbents, continue to be performed after the animal functions have ceased.

"Who, therefore, will undertake to say, that the above-mentioned erosions of the stomach are effected by a fluid, secreted by that organ, and possessing remarkable chemical properties, because it is impossible that they can be accomplished in any other way? We know, very well, the extreme vascularity of the stomach, and that its capillary vessels, and particularly its absorbents, act with unparalleled energy. We know also, that different portions of the stomach derive their vitality from different portions of the nervous system. Is it not possible, therefore, to conceive that one part of the stomach, having lost its vitality, may be acted upon by another which retains it? It is by no means incumbent upon me to make out, even the probability of this supposition, the bare possibility of it is obviously sufficient for my purpose.

"Another objection to the common explanation of this phenomenon is, that in all those instances in which it has been observed, the food, taken into the organ a short time previous to death, has been found untouched, however extensive the erosion of the stomach may have been. It is certainly very singular, that this fluid should produce no effect on the aliment, which, to prepare it for its action, has been comminuted by the teeth, mixed with the saliva, macerated by the fluids of the stomach, and finally imbued with the gastric juice itself; and that it should turn with energy upon the stomach, which has been influenced by none of those circumstances, and which is moreover protected by an epithelium, or cuticle, and its own mucous secretions." p. 44, 45.

The experiment of introducing into the stomach hollow metallic balls, perforated with holes and filled with aliment, first performed for the purpose of disproving the idea of the mechanical action of the walls of the stomach, has always been regarded as conclusively demonstrating the existence of a fluid, which, penetrating the cavities of these balls, effected a change upon their contents precisely similar to digestion under ordinary circumstances.

"I hope to make it appear not only possible, but even probable, that the villi of the stomach act immediately on the aliment, and effect the changes that have been attributed to the gastric juice. It is enough for my present purpose that such a thing is obviously possible, and being so, the phenomenon in question is no longer proof of the solvent powers of the gastric juice; for the villi of the stomach, being probably capable of elongation, and attached to a very moveable membrane, would be capable of seeking the aliment contained in the stomach and of coming in contact with that which is enclosed in the balls; and it is to be observed, that it is only that portion, which is in the neighbourhood of the holes, that is found changed.

"It is proved by Wilson Philip and others, that it is only the surface of the alimentary mass in contact with the walls of the stomach, that is changed by the gastric juice: therefore, only that part of the aliment in the balls, which is reached by the surface of the stomach, can be acted upon, according to either supposition. Hence, the fact is as much in favour of the one position as the other, and proves nothing." p. 46.

After speaking of the well known fact, that digestion only takes place on the surface of the mass of aliment, or on that part only, in contact with the coats of the stomach, Dr. S. goes on to remark.

"The promptitude with which digestion is interrupted, by the division of the eighth pair of nerves, is a sufficient evidence that there is something more than a mere chemical process going on in the stomach, for according to the commonly received hypothesis, the gastric juice, already secreted, should continue to operate upon the aliment." p. 50.

These are the points upon which Dr. Smith chiefly relies for the overthrow of the long established doctrine of digestion by the gastric juice. There are, however, certain minor ones, which he considers as bearing strongly upon the question. If the commonly received opinions are true, he argues, this must be considered the only instance in the whole animal economy, in which an important change is at once wrought upon a large volume of matter. All the changes effected, in the blood, on the aliment mixed with it, are carried on in the capillary vessels of the lungs and the nutrient ones of each tissue to which it is appropriated. Is it not surprising, therefore, he asks, that so great a change can be effected upon a large mass in the stomach, when, to accomplish changes much less important, it is necessary that the matter acted upon should be made to pass through vessels indefinitely multiplied?

The variable appearance and properties of the chyme are then noticed; and the fact that chyle, similar to that found in the lacteals and thoracic duct, is never found in the intestines is brought forward as an additional argument. Reasons, however, which our author thinks much more conclusive, are drawn from the anatomical structure of the parts. These, we cannot give more clearly than by quoting his own words.

> "The villi or papillæ of the stomach are, in their structure, essentially the same as those of the small intestines. No material difference in their organization can be pointed out, and yet we are told, that their offices are diametrically opposite, that of the villi of the stomach being to exhale the gastric juice, while those of the intestines absorb the chyle.
>
> "Bichat noticed this incongruity, and says, 'It is difficult to conceive how an organ, every where nearly similar, can perform, in different parts, functions so different. I say nearly similar, for we shall see that these papillæ exhibit differences of size, length, &c. without having any of texture or structure.
>
> "That the thoracic duct is the only medium of communication between the digestive organs and the mass of the blood, is the necessary belief of those who favour the opinion in question. It is conjectured by some, that a small quantity of nutriment is taken up by the lymphatics, but these terminate in the thoracic duct.
>
> "This vessel is of extremely small size, although the common trunk of the lacteals and lymphatics. Its coats are so exceedingly thin and delicate, that when collapsed it is scarcely discernible. Its length is very great, as it extends from its origin in the abdomen, quite through the thorax to the left subclavian vein.
>
> "If the functions of this little vessel are what they are supposed to be, it certainly performs an office of vastly more importance than that of any duct in the system. We should expect therefore, from observing the provisions of nature in less important structures, to find this organ guarded with peculiar care, and with appendages capable of performing a vicarious office.
>
> "Of all those organs, which are properly called ducts, I believe it is the longest, and of course, in this respect, the most exposed to obstruction. Its parietes too, are the most delicate and unresisting. It passes in the neighbourhood of parts, which, in certain diseases, would be exceedingly liable to press upon and obliterate it. It has no fellow, nor is there any organ which can assume its functions..
>
> "The experiment of tying this duct in the living animal, I consider to be neither conclusive for nor against the opinion, which I oppose. In many instances where it has been tied, the animal has experienced no inconvenience. In others it has proved fatal." p. 55, 56, 57, 58.

The immediate sensation of renewed strength and vigour, which is felt by one who has fasted for a length of time upon taking food, before the process of digestion has had time to commence, and which is usually attributed to sympathy, is accounted for by Dr. S. in a different manner, and in one which strongly favours his theory, as we shall see when we have completed its examination.

Having thus, to his own satisfaction, completely demolished the old theory of digestion, our author, as in duty bound, sets himself diligently to work to build up a new one on its ruins, which he styles, "*Digestion by the veins of the stomach and intestines, and by the liver.*"

> "My proposition is, that the first step in the process of digestion is effected by capillary veins, originating in the villi of the stomach with absorbing extremities, and terminating in the great branches of the vena portæ. The arguments in favour of it are drawn from the results of certain experiments, from the nature of the change effected on the aliment, from the analogy of plants with animals, and from the anatomy and pathology of the digestive organs." p. 64

In detailing this theory, we shall endeavour, so far as is practicable, to make use of our author's own words, hoping that this mode will preclude the possibility of unintentional misstatement or mis-colouring.

The doctrine of absorption by the capillary veins is by no means new. It was long since started, though soon allowed to fall into neglect, where it has remained, until recently brought forward, backed by such evidence as no longer to leave a doubt of its truth. Magendie and the elèves of his school have, by their ingenious and ably performed experiments, confirmed by those of our countrymen Messrs. Lawrance and Coates, fairly put this question at rest. What the peculiar nature of the substances they take up is, we are not told, though it is the opinion of several distinguished physiologists, that they are wholly occupied in the removal of the solids.

It necessarily follows from what we have already seen of Dr. Smith's theory, that having found a set of vessels to do the work generally supposed to be performed by the lymphatics and lacteals, these last vessels must be supplied with new functions; accordingly he says,

> "I would not be understood to deny the function which the lymphatic and lacteal absorbents are supposed to perform. It would seem, however, that the lymphatics performed some other office. Their contents, so far from appearing to be excrementitious matters, consist of a fluid which is uniform in its sensible and chemical properties, and which appears to be highly animalized, and resembling the most important constituent principle of the blood.
>
> "If the lymphatics exert no influence on their contents, but exist merely for the purpose of taking up that which has become useless, and conveying it into the mass of the blood, why, since nature accomplishes her ends by the simplest means, do not the absorbent branches terminate in the nearest veins, instead of traversing so great a distance to reach the left subclavian?
>
> "From the length of these vessels, which is greatly increased by the convolutions which probably take place in the lymphatic glands, from the nature of their contents and other circumstances, we are led to inquire whether they are not concerned in the important process of animalization, receiving certain parts of the blood from the capillary arteries, which they exalt to a higher degree of organic life." p. 66.

In pursuing the subject, after alluding to the fact to which we have just referred to as demonstrated, viz. the absorption of fluids, as water, alcohol, prussiate of potash, &c. by the veins of the stomach; he continues,

> "Again, if the veins of the stomach absorb any fluid substances except mere water, we do no violence to reason to say that they will, in some way or other, take up such substances as are insoluble, so far as we know, by any thing contained in the stomach. Most physiologists believe, that certain medicinal substances which are insoluble, are, nevertheless, taken into the circulation by the absorbents. The fact appears to me to be supported by abundant proof. We know, also, very well, that the bones and other solid parts of the system, are sometimes taken up by either the absorbents or veins, with surprising rapidity. In some instances, the most intractable substances, when lodged in the flesh, have been absorbed and removed.
>
> "That our food, solid and fluid, should be taken up by the veins of the stomach with sufficient rapidity to be subservient to digestion, is certainly not absurd. Vascular and nervous as the stomach is, we are to presume that its vital energies, in this respect, are far superior to those of any other tissues in the system. The surface too, which it presents to the food, when we consider its folds and its papillæ, must be very great.

> "The villi of the intestines are known to perform absorption with great energy, and that of a substance which does not appear to be altogether fluid. The villi of the stomach are certainly more numerous than those of the intestines and, a priori, we might fairly presume, from their anatomical structure, that they performed the same function with greater energy." p. 69.

The sensible properties of the chyme are brought forward in confirmation of our author's hypothesis; we must confess, however, that we cannot see how it favours the new theory more than the old. The effects of the division of the eighth pair of nerves, we look upon as having a much stronger bearing on the question.

> "The results of the experiments of W. Philip harmonize much more perfectly with the opinion which we offer, than with the theory of solution. In mentioning the phenomena which result from the division of the eighth pair of nerves, we could not but admire how the process of digestion should be immediately suspended, even although the food in the stomach be imbued with the gastric liquor; particularly, as it is stated by the advocates of the latter theory, that the gastric fluid does, after death, corrode the walls of the stomach. If the most important influence exerted on the food is by the absorbing powers of the villi, and if the villi receive their power to act, as they undoubtedly do, from the eighth pair of nerves, the difficulty is at once solved." p.71.

We are next presented with a comparison between the digestion of animals and plants. Analogies drawn from one kingdom of nature, and applied to another, can, at best, be considered only as collateral evidence, and must at all times be received with many grains of allowance. The evidence drawn from the inferior animals is much less objectionable, though even this should be admitted with great caution.

In the succeeding paragraph, entitled "assimilation effected by the capillary vessels," we are presented with our author's notions upon this point.

> "That it is accomplished in the capillary and other vessels, through which the aliment is made to pass before it is added to the circulating mass of the blood.
>
> "It is obvious, that whatever is absorbed by the veins of the stomach will be first conveyed through the tissue of vessels indefinitely minute, which may be said to compose the villi of the organ; next through the branches which ramify in the cellular coat, through the long tortuous vessels of ser-

sible magnitude meandering upon the surface of the stomach and between the lamina of the peritoneum.

"This, however, is not the most interesting part of its course. On reaching the trunk of the venæ portarum, along which it is slowly propelled, probably by the action of that vessel, it is conveyed to the great fissure of the liver, to be diffused through that large and important viscus, having first been mingled with the returning blood of the spleen, the pancreas, the omentum, &c. It is then again subjected to the action of a congeries of capillaries, constituting the substance of the liver.

"Here, then, is an ample opportunity for all those changes to be wrought, which may be deemed necessary for the conversion of aliment into blood. This supposition too, accords well with what we observe in the performance of other functions, by which changes are wrought in the properties of circulating fluids, viz. that they are accomplished not upon large volumes and in large reservoirs, but upon attenuated streams and in minute vessels." p. 78.

With regard to the circulation of the venæ portarum, the next point upon which an argument is founded, we must confess, that the opinions of anatomists are in a sadly loose and unsettled state, and our author's suggestions, though not wholly original, we think are entitled to great credit for their ingenuity.

Several writers on anatomy and physiology, as well as medicine, have often expressed their doubts whether the liver did not perform some other function than the secretion of the bile. Its great size and importance in the fœtal state, being apparently scarcely at this period second to the heart, its subsequent growth, and the great mass of blood which circulates in it, and its influence upon the whole system when diseased, all seem to show that this organ was intended for a more important purpose than the mere secretion of the "natural stimulant of the intestines."

A careful consideration of the phenomena of the fœtal circulation almost converts these doubts into positive conviction.

"It is well known that previous to birth, the liver predominates over all the other viscera. It is undoubtedly thus early developed for important purposes, performing, at that time, some indispensable office in the fœtal system. It is conjectured by some, that at that time it exerts an influence on the blood which is subsequently assumed by the lungs. The blood which is received from the maternal system is conveyed to the liver by the umbilical vein. It there enters the portal sinus, a part of it being taken up by the ductus venosus, while a large proportion is conveyed by the ramifications of the venæ portarum through the glandular structure of this organ. It is not in vain that the fœtal blood is thus circulated through the liver, it is undoubtedly for the purpose of its being wrought upon by the capillaries of that gland, and it is for this purpose that the liver is thus early perfected.

"In the fœtal state the system of the vena portæ is organised at the same time with the digestive organs, but, like the vascular system of the lungs, it is in a great degree dormant, the quantity of blood which it conveys being merely sufficient for their nutrition. The moment, however, that digestion begins to take place after birth, these organs become centres of fluxion, and the venæ portarum becomes charged with blood possessing peculiar properties which, in some way or other, it receives in the stomach, intestines, &c.

"At birth the circulation by the umbilical vein immediately ceases, and its place, as soon as digestion commences, is supplied by that of the blood of the venæ portarum. Must we not infer then, that this last is circulated through the liver for the same purposes as the former? for it is conveyed in the same vessels, and we cannot suppose that they are at once endued with a new action, entirely different from that which they had before performed, and which is merely for the purpose of furnishing bile, a fluid which is not needed in the fœtal state, as no digestion then takes place." p.81.

We have thus endeavoured to give a concise, and we hope, intelligible account of Dr. Smith's new theory of digestion, and think it indicates no inconsiderable degree of talent and ingenuity. It is fairly before the medical public; they are its legitimate judges; from their decision there is no appeal, and by their verdict it must stand or fall.

ART. III. *Tables of* CHEMICAL EQUIVALENTS, *incompatible substances, and poisons, and antidotes, with an explanatory introduction.* Collected and arranged by ROBERT BEST, A. M., Lecturer on Pharmaceutical Chemistry in Transylvania University. pp. 74. Lexington, (Kentucky,) 1825.

WE have examined this little treatise with great pleasure. It is illustrative of the industry of the teachers in the flourishng medical school of Lexington, and at the same time, furnishes a compend of instructive matter, that must prove useful and convenient to both students and practitioners. Its contents, as its title states, consist of three parts. 1. Tables of chemical equivalents. These are accompanied with explanatory remarks and illustrations, which we apprehend will greatly tend to facilitate a knowledge of them, beyond what is usually to be found in systematic works on chemistry. Mr. Best has not followed any author implicitly, but has selected with discrimination from the best authorities. It may be added that he selects hydrogen as the standard of unity. 2. Incompatible substances. This table is principally selected from the Pharmacologia of Dr. Paris. 3. Synoptic tables of mineral poisons, with their appropriate tests and antidotes; translated by professor Daniel Drake, from the French of De Salle. These tables are generally similar to those published by Stowe in England, perhaps even more minute and extensive. Professor Drake has added a valuable note on the vegetable poisons, arranging them, first, according to the natural orders, next as to their effect on the system, whether acrid, narcotico-acrid, or narcotic. The symptoms and treatment are also briefly discussed. In addition to the deleterious vegetables usually enumerated in works on medical jurisprudence, we observe that Dr. Drake has added the following amongst others: *Æsculus pavia. —— flava. —— Ohioensis. Cimicifuga racemosa. Actæa Americana. Ferula virosa.*

In his remarks on the symptoms, he observes that, "cattle poisoned by eating the nuts of the *Æsculus Ohioensis*, (which destroy them by inducing gastritis,) are affected with extreme vertigo, accompanied with muscular debility and tremors." We should have been happy to have met with more extended remarks on the effects of the poisonous plants that are peculiar to the western country. We trust that, at some future period, Dr. D. will find leisure to lay them before the public.

BIOGRAPHY.

A Biographical Memoir of Cornelius E. De Puy, M. D. *member of the New-York Historical Society, &c. read before the Physico-Medical Society of New-York, at its anniversary meeting on the 8th of August,* 1822. By Joseph M. Smith, M. D.

Gentlemen,

In accordance with that law of our nature, which prompts us to preserve the memory of our departed friends, and under the sanction of a resolution of this society, we propose at this time to commemorate the life and character of our late associate, Dr. Cornelius E. De Puy. It is not in every instance, however amiable in their private walks, and beloved in their social relations, that our deceased friends are entitled to a public tribute of respect. In all ordinary cases, it is enough to mourn for them in private, and to recount their virtues in the circle to which they were endeared. But there are occasions in which something more is proper. The death of individuals distinguished for active and unbounded philanthropy, extraordinary attainments in literature or the arts, important discoveries in science, or great civil or military services to their country, is calculated to produce a deep and lasting impression on the public mind; and accordingly, to all such are awarded, by common consent, the honours of public orations and finished biographies; their names are recorded on the page of history, and statues and temples are erected to perpetuate their memory. But these honours are merited by comparatively few; and no one can reasonably expect to deserve them, who does not, either by the force of his genius, or with moderate powers, by unceasing sedulity, rise greatly superior to his fellows in the benefits he confers on his country or the world. There is still another class of individuals, who though their lives afford no matter for the historian or biographer, are distinguished by so many noble and generous traits of character, and so many evidences of intellectual superiority, as well as indications of future pre-eminence and usefulness, that to them, on their premature removal from life, is properly adjudged, at least the honour of public eulogy. In this class, the subject of the present notice held a respectable rank.

Were the feelings, which friendship inspires, likely to endanger the correctness of the estimate we make of another's character, I should hesitate before attempting to proceed in the duty assigned me; but this, it is believed, can rarely or never be the case when the chief merit of an individual is derived from circumstances which have as closely connected him with the public, as with his nearest friends. To the public, legitimately belong the capacities and talents of the head, and to friends, the affections and sympathies of the heart; hence, those qualities which we find in another as common property, may be examined with equal impartiality by a friend, and doubtless will be with more precision, than by one who has never felt any personal interest in his prosperity. Yet, to avoid the errors arising from excited feelings, let us, instead of exclusive panegyric, review the considerations that claim for our late associate, the honour which the present exercise is intended to bestow on his memory.

The bereavement we have suffered, is rendered more than usually lamentable by the circumstances under which it happened. When those around us pass away through the outlets of disease or old age, we contemplate their departure under views with which we are familiar; and consequently, I seldom experience any additional pain from the manner of their death; but when they fall by sudden and unexpected disaster, then truly do we feel the force of the truth, "in the midst of life we are in death;" then, indeed, is the heart made to feel the poignancy of grief.

Scarce had our city recovered from the gloom occasioned by the loss of the packet Albion on the shore of Ireland, than we were shocked by the tidings of a similar calamity which happened to a party belonging to the Franklin 74, in attempting to land on the coast of Chili. In the former instance, we not only wept at the recital of the tale, which numbered so many lives suddenly withdrawn from the sum of human existence, but we opened our bosoms to a free communion with those who had suffered by the loss of friends and relatives: we felt that our country had been deprived of citizens eminently worthy in their several professions and callings; and we turned with more than common sensibility to the college of a sister State, and, in the spirit of condolence, participated in her grief for the loss of a young but distinguished professor. In the latter instance, our feelings have been somewhat of a different sort. The Franklin left the United States, bearing with her to a distant region, those for whose welfare were breathed the ardent prayers of innumerable friends, and the best wishes of the American people. Besides the solicitude felt for the personal safety of those who had embarked in her, there was a more than ordinary interest excited by the expectation, that her cruize in the Pacific Ocean would afford many opportunities of extending the knowledge of the power and character of our country, and of enlarging the boundaries of science.

In this latter service Dr. De Puy was exclusively engaged. Under the influence of such feelings and such expectations with what appalling emotions did we receive the intelligence, which announced the fatal adventure on the 19th of March; an adventure long to be remembered, as it deprived the expedition of its principal labourers in natural science, and this society of one of its most promising and valuable members. But he did not perish alone: in the number lost on that occasion were several officers, whose gallantry and accomplish-ments had placed them high in the estimation and confidence of their country. But while

> "For them, is sorrow's purest sigh,
> O'er ocean's heaving bosom sent,"

let it here be our duty and melancholy pleasure, to speak of him who was endeared to us by the strongest ties of social fellowship, and whose death we have reason deeply to lament.

A long period of friendly intercourse, and, I may add, of intimacy with Dr. De Puy, enables me to assert that he possessed many rare and excellent qualities; and that he was distinguished for his rapid and uninterrupted advancement in literature and science; we say rapid and uninterrupted, for his mind was of so active a turn, that idleness was a state he could not endure; and as his temperament was of that moral cast which made him shun the dissolute and vulgar expedients of killing time, and especially, as he had an early fondness for, and subsequently a strong ambition to excel in science and classical learning, his attention was constantly devoted to intellectual improvement.

He was born of Dutch parentage, in Ulster County, New-York, about the year 1791. His education, prior to the commencement of his medical studies, appears to have been limited to the branches usually taught at a grammar school. But this, to one so ardent in the pursuit of knowledge, was a foundation sufficiently broad for him to proceed in the erection of a superstructure, which, had he lived to complete, we believe, would have been an ornament to his country, and to him a monument of fame. Commencing his course of medical reading in the country, under the direction of an eminent practical physician, he soon acquired that knowledge which fitted him to enter upon the more elaborate studies connected with the proper attendance upon the lectures delivered in the University of this State. On removing to the city, he became deeply impressed with the advantages to be derived from the prelections of public teachers; the ready access to professional and miscellaneous libraries, and from visiting the institutions for the healing of the sick. These considerations determined him to complete his pupilage in the city, and eventually to make it his permanent residence. He was graduated doctor of medicine in the University, in the year 1814. Those, who knew him at that period will testify, that few candidates for the honours of the college were distinguished for a wider range of general information, or a more particular and systematic knowledge of the several branches of medical science. Prior to his graduation, he held for a considerable time the place of resident physician in the New-York Alms-House, an establishment superior in many respects to a regular hospital for improvement in clinical medicine. While in this institution, he discovered a ready talent for discerning the nature of diseases, and a correct judgment in prescription.

His settlement in this city, in the practice of his profession, may be regarded as one of the circumstances which concurred to favour the institution of the Physico-Medical Society. The views, entertained by the projector of this society, were early embraced by Dr. De Puy; and his zeal and talents were immediately engaged in digesting its plan, and bringing its objects into a definite form. On the 8th of August, 1815, he assisted at its organization; and subsequently proved himself one of its most able and indefatigable supporters. His intelligence and literary qualifications, secured to him, from the commencement of the society to the period he left New-York, his annual election as chairman of the committee of publication, an office, the duties of which he discharged with a fidelity and judgment that deserved and obtained the highest approbation. His professional attainments were fully tested in the publication of the first volume of our transactions, which appeared in 1817, two years after the institution of the society. The contributions, made by himself to that volume, have been justly esteemed among its most ingenious and logical essays. His first paper, entitled "An Inquiry into the botanical history, chemical properties, and medicinal qualities of the Erigeron Canadense."

was read within a month after the society commenced its operations; a fact we deem worthy of being mentioned, inasmuch as this communication was entirely voluntary, or, in other words, was not called for at that particular time, by the obligation which the constitution provides for securing the regular reading of papers. It was offered as a testimonial of his devotedness to the interests of the society. The several topics treated of in that essay are discussed in a practical and satisfactory manner.

But the merit of Dr. De Puy, as a medical writer, is more fully discovered in his "Dissertation on the uniform action of the Absorbents." This paper was submitted to the society on the 3d of September, 1816, and may be regarded as the ablest production of his pen. It was evidently the result of much reflection; and though the phenomena adduced to establish his opinion that, "the action of the absorbents continues uniform throughout every stage of life, and in every condition of the body, whether of health or disease, unless when mechanically interrupted," are, for the most part, generally known, and considered as proving an opposite doctrine, yet his ingenuity made it appear, that all of them could be explained on the principle of an *uniformity* of absorbent action. And further, he contended, and with great plausibility of reasoning and variety of illustration, that the phenomena of health and disease, as well as the physiological changes, which occur in the different periods of life, could not be reduced to a consistent theory without admitting the principle in question. He considered the absorbents as placed beyond the reach of *stimulus* or *counter-stimulus*. Their functions, he maintained, were entirely impassive, and that, though the heart might be the *primum vivens* of the system, the mouths of the absorbents were its true *ultimum moriens*. Whether this doctrine will be found true, to the extent it was carried by Dr. De Puy, is perhaps questionable; but, however this may be, all must acquiesce in the sentiment of his reviewer, that "the considerations, urged by the author, evince an original and comprehensive mind, knowing, at once, how to make observations, and to reason upon them."

A third paper was read by Dr. De Puy on the 16th October, 1817, entitled, "Remarks on the efficacy of friction in apoplexy and palsy, proved by cases." In this communication, we are presented with the most indubitable proofs of his ability as a practical physician. The cases are drawn up with great neatness and perspicuity, and his pathological reflections are highly interesting and instructive.

In thus noticing the writings of Dr. De Puy, it will be recollected, that we have spoken of those only which have appeared before the public. Several other tracts of a practical character were read by him before the society at different times, all of which were creditable to their author. It must not be supposed from the number of papers furnished by Dr. De Puy for the first volume of our transactions, that he was anxious to appear in print. That he was not influenced by a feeling of this sort, is evident from the fact, that, though always engaged with his pen, he never contributed to any of the medical or other periodical journals of our country. This circumstance, we think, exhibits, in a strong light, the motives which induced him to present his first offerings to the public through the medium of our printed transactions. Though ambitious of individual respectability as a writer, he hoped, that by his own communications to the society, he might be able to do something which would tend to render its first publication acceptable to the profession. The character of the society was with him an object of peculiar regard; and all his assiduities seem to have been directed more to the view of increasing its reputation, than of advancing his own fame.

When we review these demonstrations of his zeal in promoting the objects of this association, we are made to feel how tenderly we should cherish the recollection of his labours, and how great is the respect we owe to his memory. The first efforts of young men for the public good, or the advancement of science, are always regarded with complacency, though they may fail to be positively useful ; the first efforts of Dr. De Puy were emphatically directed to the high and noble purpose of establishing an institution for the promotion of medical science—an institution whose seventh anniversary we this day celebrate, in lamenting his death, and pronouncing his praise.

Though Dr. De Puy did not appear before the public as a writer after the publication of our transactions, it must not be supposed, that his ardour in the pursuit of knowledge had in the least degree abated. He still pressed onward in the retired paths of literature and science, making great additions to his stock of general information. He carefully preserved his acquisitions in Grecian and Roman literature, and devoted considerable attention to the French and Italian languages. To the French language he was particularly attached ; he studied its genius extensively and critically, and spoke it with little or no hesitancy. He also made himself familiar with the modern classics, as well as the fashionable reading of the day : but the subject to which he more particularly gave his attention for the last two or three years, was one of confessedly great magnitude, and of immense importance. We allude to Hygeia, or the science of health. It must not be concealed that Dr. De Puy, though fully qualified to discharge the duties of a practitioner, had lost, in a measure, his confidence in some of the boasted principles of therapeutics. He often doubted the efficacy and propriety of that polypharmacy and multiplicity of remedies which are sanctioned by the generality of physicians ; and moreover, was frequently disposed to question, if medicine, as we find it through the world, was not, upon the whole, rather an evil than a benefit. These doubts were probably elicited during the rigid examination which every medical subject underwent when submitted to the analysis of his strong and discriminating mind. Such suspicions, if not carried to the point of absolute infidelity, of which in his case there was no danger, were, we believe, calculated to make him a better physician. The most important effect they appear to have produced, was to turn his mind to that department of science, which, if brought to perfection, would in a degree supersede the necessity of an extensive materia medica. The study of hygeia he thought was too much neglected. In his first surveys of this field of inquiry, he was so struck with its fertility, that he resolved to enter upon its cultivation. He accordingly read with attention all the modern works relating to the subject. The French and German he found had contributed by far the most towards the elucidation of its elementary principles. From the older writers, whom he consulted in the true spirit of philosophy, he obtained many valuable hints and interesting facts. In a word, he diligently sought out every source of information which had a bearing upon the main object of his inquiries. His mind thus stored with the knowledge of others, was prepared to bring its own energies into the work of original investigation. Those who, in private, have enjoyed his free communications on the various topics embraced in his researches, could not but derive instruction from them; and at the same time feel a conviction, that he was fully qualified to advance the science in question. Had he lived, we have every reason to believe, that at some future time he would have distinguished himself by elevating the study of hygeia to its proper rank among the branches of professional education.

The attainments of Dr. De Puy in natural history were highly respectable. Though not devoted to any branch in particular, his proficiency, generally, was such as enabled him with little preparation to prosecute with systematic accuracy, any department belonging to that interesting and extensive study. In his tour through the northern and eastern States and the Canadas in 1820, he availed himself of the opportunities which offered, to extend his knowledge of mineralogy and geology. He travelled solely for the purpose of improvement; and, we believe, was abundantly rewarded for his time and industry. The falls of Niagara, the lakes, and the diversified and stupendous scenery of the north, afforded subjects for contemplation in perfect congruity with the general tenor of his mind. The sublime in nature powerfully arrested his attention, and he dwelt upon its objects with a solemnity peculiar to himself.

His mind at this period appears to have arrived at that point of maturity, in which, to a comprehensive range of knowledge was united a decision of character that fitted him, in a peculiar manner, for the enterprise in which he was finally engaged. It was early in the summer of the last year, that he conceived the design of visiting the countries of South America. The facilities offered him by Commodore Stewart on board of the Franklin, he thought were so favourable to the prosecution of a favourite object, that he determined to embark in her. This determination was not made in a moment, when the imagination pictured to him a new world of gratifications, but was the conclusion of much serious reflection. He fully considered the social privations, as well as the hardships and dangers, which must necessarily attend a three years' absence in journeying by sea and land in a distant and comparatively unfrequented quarter of the globe. But these discouragements he regarded but as fleeting shadows over the bright prospect which fairly opened before him. The gratification of a laudable curiosity, the extension of his own knowledge, and the probability of being able to communicate to his countrymen, or at least to his friends, something interesting and original concerning the natural history and political condition of the rising states of South America, were, in his mind, considerations that outweighed all the objections against the proposed undertaking. Provided with every thing necessary to aid him in his researches, in the possession of vigorous health, and in the best feelings of a son, a brother, a friend, and a patriot, he left his country full of hope and full of composure. Heaven seemed to smile on his purpose; and in human calculation he was destined to return: but in the council of Omnipotence it was otherwise decreed. He was, indeed, permitted to contemplate in the southern hemisphere, to use his own beautiful quotation in a letter to a friend, "a new heavens and a new earth." and to enter upon the labours and enjoyments he anticipated. But in an hour when least disturbed by fearful apprehensions, when no danger appeared to darken his prospect, the frail bark in which he sailed on an excursion from Valparaiso to Quintera, foundered near the coast, amidst the breakers of a swelling sea. Merged in the tumultuous waves, his earthly hopes were suddenly blasted; and ah! who can tell his emotions when, in the consciousness of his situation, he found himself entwined in the arms of death, and sinking to a watery grave!—But while we pause to meditate on his tragical fate, let us not forget to joy in the reflection, that he was ever thoughtful on the uncertainties of life, and the contingences by which it might be suddenly closed; and what is more important, that he was strongly impressed with the truth of the Christian religion, and had a deep sense of its high and holy obligations.

Though Dr. De Puy had scarcely attained his thirtieth year, there was something in his character which strikingly elevated him above the generality of men. At all times modest and unobtrusive, his social qualities were known to those only who were intimately acquainted with him. His conduct was strictly governed by a nice sense of propriety; and his deportment, both in public and private, was eminently calculated to ensure respect and command attention. To talents capable of advancing the interests of science and literature, he united an ardent disposition to promote the cause of universal benevolence. Distinguished rather for strength and capaciousness of intellect than brilliancy of parts, he was more particularly qualified for undertakings which require the exercise of the understanding. When engaged in the study of a favourite subject, he gave his whole mind to its attainment, and at such times, no other object, however interesting in itself, could in the least degree divert his attention. This peculiarity may, we believe, be considered as one of the most distinguishing characteristics of his mind; for it frequently seemed to operate with an intensity that deprived him of the enjoyments that spring from a variety of mental occupations. A mind capable of such inflexible devotion to a particular pursuit, was admirably fitted to study the character and explore the riches of a foreign country; and it was this consideration that enabled the friends of Dr. De Puy to assure themselves, that his travels would afford him an abundant increase of knowledge and fame. That his time was well and unremittingly employed after he left this city, is fully attested in his journal and voluminous correspondence. On the voyage to Valparaiso he made so much progress in the study of the Spanish language, that on his arrival there, he could discourse intelligibly with the people of Chili. And, finally, considering his brief opportunities for research, the extent of his observations, and the minuteness with which he has detailed them in writing, are truly surprising; and it is to be hoped, that his manuscripts, in judicious hands, will afford a selection of matter sufficiently interesting to communicate to the public.

Medical and Philosophical Intelligence.

FOREIGN.

On the presence of water in the lungs of drowned persons.—If there had not been something defective in the mode of examination of bodies found drowned, the presence or absence of water in the lungs after such an accident would not have remained to this day nearly as unsettled a point as it was more than a century ago. The trial of Spencer Cowper, for the murder of Sarah Stout, which took place at Hertford in 1699, affords a curious specimen of contradictory evidence on this subject: the witnesses were, for the most part, unprovided with any positive evidence drawn from the inspection of the lungs of the human subject after drowning; and we think we could point out more than one county in England in which the verdict of 'Found drowned' is so often given without the body being opened, as to cause the experience of medical witnesses to be quite as limited in the year 1825. In Professor Mayer's paper we have a long list of authorities both affirmative and negative; and the question is of so much interest in a medico-legal point of view, that every attempt to make it the subject of research in the human subject, if not of experiment upon the lower animals, deserves attention and encouragement. Professor Mayer, having made many experiments on animals, and invariably finding a small quantity of water or bloody serum in the lungs, repeated them, with the sole difference of drowning the animals in water containing colouring matter. He asserts that the results were still the same, that he found a fluid in the air-passages, having the colour of the fluid in which the animal was drowned: in one experiment a cat was immersed in water to which hydrocyanate of potash had been added, and kept in five minutes, being taken out before it was dead, to prove that the fluid actually entered the trachea during life: a portion of the trachea was cut out, a glass tube, previously dipped in a solution of hydrochlorate of iron, was passed into it by the opening, and a deep blue precipitate was immediately formed. The lungs were full of froth, which afforded a similar test. The experiment was repeated on another cat, with precisely the same results.

From fifteen experiments, which are detailed, Professor M. deduces the conclusion that water does penetrate into the lungs of drowned persons during drowning. He refers to the experiments to prove that this takes place whether the animal remains a long or a short time in the water; whether it is taken out living or dead, or several hours after death; whether the animal is drowned in hot or cold water; whether it is kept wholly under water or allowed to come occasionally to the surface; whether pure water or coloured fluid, or some chemical re-agent, is employed; and equally in different kinds of animals. Lastly, he adds, that he has examined several bodies of drowned people, and has always found a more or less aqueous froth or an actual liquid.

The importance of this question does not entirely rest on its interest with a view to medico-legal investigations: it has some reference to our attempts to resuscitate drowned persons. For if more or less water always penetrates into the trachea and its ramifications, or even if this happens occasionally, even when the body has not been long in the water, it may be necessary to disembarass the air tubes of such an obstacle to their due inflation. In an example recently witnessed by the writer of this notice, it was the belief of all the professional assistants that their attempts to restore respiration were materially impeded by this circumstance, although permission could not be obtained to verify the fact by an examination. Professor Mayer has found by several experiments, that, by using an elastic tube and syringe, he could draw out any fluid from the trachea as far as its division, but could not command what was situated lower. This, however, will generally be sufficient, as all the fluid in the bronchiæ will be rapidly absorbed. According to some experiments formerly published by him in the *Journal Complémentaire*, fluids poured into the lungs were found two minutes afterwards mixed with the blood of the left ventricle: in four or six minutes mixed with the serum of the pleura and pericardium; and at the end of five or eight minutes in the urine.—*Lond. Med. Repos.*

Cicatrix of the heart.—M. Bougan presented to the *Académie Royale de Médecine*, on the 16th of December, the heart of a person who died in his hospital, presenting traces of an old penetrating wound of the chest: the lung, pericardium, and heart had been wounded. These different organs were cicatrised. The patient died of a disease unconnected with the wound.—*Ibid.*

Oil of the Euphorbia Lathyris.—M. Grimaud gave account to the Royal Academy of Medicine of Paris, at their meeting on the 21st of February, of the experiments of Dr. Calderini, on the oil of the *Euphorbia Lathyris*, which is eminently purgative. M. Grimaud mentioned that he had repeated the experiments of the Italian Physician, and that he considered this oil preferable, in many respects, to that of the croton tiglium. The dose is from four to eight drops, for an adult.—*Ibid.*

Professor Autenreith's Opinion of Syphilis.—Dr. Autenreith, of Tubingen, says that Wurtemberg has furnished a proof that syphilis is a modification of lepra, and has replaced the latter malady. Syphilis penetrated into Wurtemberg a century later than into the rest of Germany. During that time leprosy continued to prevail: but, after syphilis had been introduced, that disease entirely disappeared. Professor Autenreith regards gonorrhœa as a disorder very nearly allied to lepra, as it was more frequent at the time of the introduction of the venereal disease.—*Ibid.*

Diagnosis between Irritation and Inflammation of the Mucous Membranes of the Bronchiæ.—M. Nauche thinks he has discovered a chemical test of bronchial inflammation in the secretion from the mucous surfaces. In the natural state, or where there is merely *irritation*, the mucous secretion he has found to be acid, while, on the other hand, when actual inflammation obtains, the nature of the secretion is changed, and it becomes alkaline. The two states are readily recognised by turnsol paper, which turns red with the one and blue with the other.

M. Nauche has examined the expectoration, with respect to its acid and alkaline character, in the diseases of the respiratory organs. He believes, from this inquiry, that they may be divided into matter produced by irritation—an increased secretion of the mucous follicles, which line the membrane of the air-passages, and into matter, or expectoration, which results from their inflammation. He has observed that the white, mucous, frothy expectoration, which is frequently brought up in large quantities by persons in a state of agony, has always an acid character, when the air-passages have not been the seat of previous disease. This character is likewise found in the white, frothy expectoration which occurs during the whole continuance of pleurisy, whether acute or chronic; and at the commencement of pneumonia, when the matter expectorated is white, or even yellow. It is often lost in the course of this disease, and re-appears towards its decline. The acid expectoration is likewise found in emphysema of the lungs and scrofulous phthisis, when the tubercles are but little developed, in the state called crude. It is evident, in all these cases, that the mucous membranes which furnish the expectoration are only in a state of increased excitement, and that they are in no degree inflamed. M. Nauche has likewise found acid expectoration in certain advanced cases of phthisis. He believes that this depended upon these matters being the product of an increased secretion of the mucous membrane lining the excavations formed by the tubercles.

The expectorated matters, on the contrary, are always alkaline in inflammation of the mucous membrane of the bronchiæ, and in all the cases designated by the names of acute and chronic colds, or mucous phthisis (*phthises muqueuses.*) Although this expectoration is not regarded as purulent, it is nevertheless a kind of pus peculiar to inflammation of these membranes, and analogous to the purulent serosity which is furnished by serous membranes when in a state of inflammation.

The expectoration likewise becomes alkaline in peripneumony, when the inflammation of the pulmonary tissue communicates itself to that of the mucous membrane of the bronchiæ; and this secretion is the product of the inflammation of these two tissues.

The expectoration is likewise alkaline in phthisis pulmonalis, in the second or third stage, when the tubercles become broken down. It is usual, in such cases, to find the internal membrane of the lungs deeply altered.

It frequently happens, particularly among phthisical patients, that both these kinds of expectoration are to be found in the same vessel. That which results from an augmented excitement comes up most easily, is white, frothy, and acid; the other is brought up with difficulty, is yellow, thick, and alkaline. In this disease, when the patient has only the former kind of expectoration, his life is often in the greatest danger.—*Medico-Chirurgical Review.*

Fatal Asthma from Affection of the Glottis.—The researches of Magendie and others, teach us that, 1st, the constrictor muscles of the glottis are supplied by filaments from the superior laryngeal nerve, whilst the dilator muscles are supplied by branches from the inferior laryngeal or *recurrent* nerve; 2d, that the glottis dilates during inspiration, and is closed, almost hermetically, when we make any considerable muscular exertion, as in lifting a weight, for example. Every one must have observed that the breath is firmly retained when we make any great straining exertion with the muscles, especially of the upper extremities. These physiological points are requested by our author to be borne in mind, as they will come in to an explanation of the following case.

Case. Michel, 22 years of age, a servant, was received into the hospital Cochin, the 26th of June, 1822, having been discharged only eight days previously from a Maison de Sante, where he had been under treatment for two months, for what was called a putrid fever. The following symptoms were now observable; viz. considerable hoarseness—violent pain in the throat—great sense of suffocation on the least muscular exertion—tongue white—appetite good—pulse frequent and small—face pale and emaciated—chest sonorous, except at the inferior part of the right side—respiration audible in all parts of the thorax—nothing remarkable in the action of the heart. The same symptoms were observable the following day. He expectorated abundantly. At ten o'clock in the evening he was obliged to start from his bed—his inspirations being profound and frequent, accompanied by a peculiar hissing noise. The patient appeared terrified, his eyes starting, and dreading instant suffocation, which indeed appeared inevitable. His pulse was scarce perceptible. These alarming symptoms abated a little in the night. *June* 28. Still great anxiety. Blister to the region of the larynx. In the course of the day, a return of the sense of suffocation, with a horrible state of anguish, during which the patient tore the blister off his throat, and appeared strangling—his head erect, and his neck stretched as much as possible. 29th. Sense of strangulation still more distressing than ever—he was constantly putting his hand to his throat, as if to remove something that was strangling him. He cried for prompt relief from his dreadful anguish, his eyes starting from their sockets, and his countenance an image of despair—the whole of the respiratory muscles in a state of convulsive orgasm. These horrible symptoms continued till four o'clock in the morning of the 30th, when death put an end to his sufferings.

Dissection. An abscess was found situated at the posterior part of the larynx, and also on the sides, the cavity of which was capable of containing a filbert, and its internal surface smooth. The cricoid cartilage was denuded. On closer examination, it was found that the abscess extended round the cricoid cartilage. The crico-arytenoid muscles were of a greenish colour. The arytenoid cartilages were confounded with the muscles abovementioned, which were in a state of disorganization. No nerves could be traced in them. The arytenoid muscle, however, and its nerves were well preserved. The glottis was not above three or four lines in length (its rima.) The articulations of the arytenoid cartilages with the cricoid were destroyed. The mucous membrane of the larynx was pale, and the cavity itself filled with reddish and frothy mucus, which was also found in the trachea and bronchia. The mucous membrane of the lungs was, generally speaking, of a deep red colour. The inferior and posterior portion of the right lung was hepatized, but all the rest of the lungs sound.

There was no disease in any other part of the thorax. *In the small intestines were found numerous ulcers perfectly cicatrised.—Ibid.*

DOMESTIC.

Interments in the city of New-York.—This subject has again very recently been brought before the constituted authorities of our city, on an application from a number of our citizens, so to modify the present law as to permit interments in the private vaults already existing in the different burial places within the city. This application was backed by the written opinion of upwards of a hundred of our physicians, who expressed it as their belief, that no possible injury to the health of the inhabitants could arise from burying in private vaults. Presenting itself in so formidable a shape, the question received from the corporation of our city, that deliberate consideration, to which its own intrinsic importance, as well as the various interests concerned in it, so justly entitle it. After being referred to a committee consisting of Alderman Cowdrey, Ald. King, and the Recorder Mr. Riker, who presented an able and elaborate report against the request of the petitioners, it was discussed at length before the board, and finally resolved by a very large majority, that it was inexpedient to make any alteration in the existing law in relation to interments. By the adoption of this resolution, burials in vaults as well as in common graves, are forbidden within the limits of our city.

On this decision we beg leave to congratulate the public. And to the members of the board who voted in favour of these resolutions, the meed of applause is justly due for the manly and independent stand which they took on this occasion. The report of the committee is, we understand, shortly to be published; if so, we shall make it the subject of especial notice in our next number.

Extract of a letter to Alex. H. Stevens, M. D. of New-York, dated Morris Town, Oct. 4th, 1823.

Absorption of the cutis.—There is at this place a curious case of the absorption of the cutis, while the cuticle remains entire. The patient is a young man of about 16 years of age. He was severely attacked with the typhus fever, which was attended with copious evacuations of blood from the bowels, and also an obstinate diarrhœa. As he began to recover, the absorption took place. It is situated in the neighbourhood of the large joints, and extends in horizontal bands nearly around the limbs. When the patient lay on his back, the cuticle over the absorbed parts presented a pink appearance, but when the patient was raised, these parts became of a bright crimson, and the minute vessels might be seen ramifying in every direction. Whilst the process of absorption was going on, no pain or soreness was felt in the part. The cutis has never been replaced, but a kind of gelatinous mass appears to have been deposited. The divided ends of the cutis, which has the appearance of having been cut with a knife, may easily be brought in contact by means of the fingers. On passing the finger along the thigh, the deficiency is very evident. The young man suffers no inconvenience whatever from it. I have never heard of a similar case.

Yours respectfully,
JOS. DWIGHT HARRIS.

A case of Hæmatemesis, accompanying the menstrual discharge, by Ferdinand Ludlow, M. D.—I was called on the evening of Aug. 7th, to visit H—— H——, a girl aged 14 years, of a leuco-sanguineous temperament. Upon inquiry, I found she had menstruated for the first time, in December last. No peculiar symptoms accompanied the discharge. I found her labouring under great general irritation, her pulse full and hard, and her skin hot and dry. She complained of great sickness at the stomach, and of a violent pulsation in the epigastrium. Her discharges presented a morbid appearance, and her tongue was much coated.

I learned from her mother, that a few days before she was confined to her bed, she had suffered from violent head-ache, and sickness at the stomach, accompanied with stupor and pain in the epigastrium, and that on Friday evening, she had vomited for the first time, a quantity of blood, supposed to be nearly a pint. It appeared coagulated and mixed with a dark green fluid. The alvine discharges, produced by a dose of Rochelle salts this morning, presented the same dark green colour. A copious discharge of the menses commenced this morning.

She was put upon a strict diet, and directed to take early next morning a purgative composed of calomel and rhubarb ten grains each, combined with three of the pulvis antimonialis. The next day I found that her medicine had operated well, and that her symptoms were all much improved. The head-ache, however, still continued, and she had vomited once during the day; the injection was slightly marked with blood. She still complains of pulsation in the epigastrium, and frequent syncope.

Aug. 9th. I found her worse this morning, all her symptoms being aggravated. Previous to my visit, she had been seized with a violent fit of hysteria, from which she was relieved by the usual stimulant applications. The menstrual flux is less than yesterday. The head-ache, sickness at the stomach, and throbbing in the epigastrium still continue. I remained with her until 12 o'clock at night. During the evening, she threw up about a pint of blood. It was in a fluid state, and unmixed with aliment or other substances.

Aug. 10th. I found her more tranquil, her pulse and skin in a better state, and her appetite improving. A magnesia julep, ordered yesterday, had operated several times. The menstrual flux continued the same as yesterday. The pulsation in the epigastrium, and the sickness in the stomach, though both lessened, had not wholly disappeared. In the evening she complained of a general and troublesome itching over the whole surface of the body. She had vomited once, but had raised no blood.

Aug. 11. All her symptoms have improved, and the menstrual flux is lessening. A slight degree of sickness at the stomach, and itching of the skin still remain.

From this period she improved rapidly. The catamenial discharge ceased on the 15th, and her appetite and strength increased so fast, that on the 20th, she was in a state to make a visit to the country.

Medical commencement in the University of New-York.—At the annual commencement of the College of Physicians and Surgeons in the city of New-York, held on Tuesday the 12th of April, the degree of Doctor of Medicine was conferred on the following (fifty) gentlemen, to whom the Regents had granted said honour.

Benaiah Hanson, William C. Hickock, Theodore L. Mason, Luke Barker, Oliver Bronson, James T. Cromwell, Joseph W. Duval, Edwin Dey, Edwin A. Ely, John C. Fanning, John I. Graves, Wormoldus S. Kuypers, James Macdonald, Peter Parks, James H. Rodgers, Henry Rose, John I. Ruton, Marcus Sears, James O. Smith, Ebenezer Storer, Junius Thompson, Van Rensselaer Ten Broek, Philip Ten Eyck, John Tiebout, jun. Philip Van Arsdale, Alexander F. Vache, Field Ver Meule, Edwin Webb, John M. Cornelison, Cicero Hunt, John R. Hunt, Isaac James, Amos S. Miller, Bernard M'Neil, Archibald B. Simpson, William H. Glascock, Frederick J. Cutlar, James B. Yellowley, Trezevant de Graffenried, Edmund J. Felder, Thomas W. Hutson, John S. Palmer, Alexander Williams, Thomas B. Turner, James M. Williams, Stith F. Jones, John A. Whetstone, Jacobus Moranus, George W. Codwise, Richard Charles.

Prize Essay on Consumption.—Dr. Andrew Hamersley, of thi scity, is the writer of the successful essay, which obtained the premium of fifty dollars offered by the State Medical Society for the best dissertation on the causes and treatment of consumption. We understand that Dr. H. is about putting his essay to press.

The LINNÆAN SOCIETY of this city, a branch of the Linnæan Society of Paris, held its Annual Meeting on the 13th of June, at the Governor's room in the City Hall. His Excellency the Governor was present, and Dr. Mitchill presided. Dr. Felix Pascalis read a very able and interesting memoir on the discoveries made during the past year in the several branches of science which come within the cognizance of the Society.—His address was ordered to be printed.

The following is a list of the members and officers of the New-York Section of the Linnæan Society:

Honorary Members of the Parent Society.

SAMUEL L. MITCHILL, M. D. &c. *Honorary President.*
FELIX PASCALIS, M. D. *President.*
THOMAS JEFFERSON.
DE WITT CLINTON.
SAMUEL AKERLY, M. D.
BENJAMIN SILLIMAN, M. D.
DAVID HOSACK, M. D.

Corresponding Members.

JACOB BIGELOW, M. and JNO. DAVIS, of Boston.
N. S. HARBEMONT.
C. LE SUEUR.
THOMAS LION, M. D.
JNO. TORREY, M. D.
JAMES E. DE KAY, M. D.
Rev. LEWIS DE SCHWEINITZ.
JOSEPH BLOODGOOD, M. D.
JEREMIAH VAN RENSSELAER, M. D.
ABRAHAM HALSEY, Esq.

The following gentlemen were also elected additional Corresponding Members:

LEWIS C. BECK, M. D. of Albany.
Baron LEDERER, Consul of Austria, in the U. S.
CHARLES HOOKER, M. D. of New Haven.

Rensselaer School.—An institution under this name has been recently founded at Troy, in the state of New-York, by the liberality of the Hon. STEPHEN VAN RENSSELAER of Albany. The subjects of instruction are, Chemistry, Geology, Mineralogy, Botany, and their attendant arts: and the grand and paramount object is, their practical application to the purposes of life. The students are directed to experiment in succession during the winter, while in summer, their acquired knowledge is to be applied to the analysis of soil, and the process of manufactures, and the mechanic arts. But it is to be practically applied to agriculture in its varied and diversified branches. The plan, in fine, is directed to the *scientific education* of young men, whose opportunities are too confined for receiving the ordinary collegiate instruction, and in this view, it supplies an important void in our means of diffusing knowledge.

We shall not dwell on the diffusive benevolence of the founder of this school, or enlarge on the rich promises of good which it holds forth in perspective. The patronage which the cause of science has received for many years from the same source, has inseparably connected the name of Van Rensselaer with the progress of improvement in this country; nor can its history ever in after times be written without assigning him a place amongst its earliest and most liberal benefactors.

The following is a list of the officers of this Institution:

The Rev. Samuel Blatchford, D. D. *President.*

O. L. Holley, Esq., and Theodoric Romeyn Beck, M. D. *Vice-Presidents.*

Dr. Moses Hale, *Treasurer.*

Amos Eaton, Esq. of Troy, *Professor of Chemistry and Natural Philosophy, &c.*

Lewis C. Beck, M. D. of Albany, *Professor of Botany, Mineralogy, Zoology, &c.*

Medical School of the University of Vermont.—The following are the names of the Professors, who, under the new organization, have been attached to this institution, with the different departments in which they are to instruct:—

Henry S. Waterhouse, M. D. *Surgery and Obstetrics.*

George W. Benedict, A. M. (Professor of Mathematics and Natural Philosophy in the University.) *Chemistry.*

John Bell, M. D. *Anatomy and Physiology.*

William Sweetser, M. D. *Theory and Practice of Physic and Materia Medica.*

The good share of patronage already received by this institution—its peculiarly advantageous location—the growing importance of the town in which it is situated, with the facility of its communication, both by land and water, with the various important parts of our country—its connexion with the State University, whose prospects, notwithstanding its recent misfortunes, are so fast brightning—and finally, the strong and active interest taken in it by many distinguished and enlightened individuals, all combine to make us cherish the hope that it is destined to maintain a highly respectable rank among the Medical Schools of our country.

The lectures will commence at Burlington, on the second Wednesday of September. The terms of instruction are continued as heretofore.

In Dr. Delafield's paper on Artificial Pupil, he has alluded to the difficulty of obtaining proper instruments for operating on the eye, and particularly the iris knife, described in his paper. Since it was printed, he has succeeded in procuring an excellent iris knife, with which he has operated with perfect facility. It was made by Rose and Sellers, cutlers, of this city.

QUARTERLY BIBLIOGRAPHICAL NOTICES.

Annals of the Lyceum of Natural History.

The 9th No. of this Journal has just appeared. It contains papers on Entomology, Herpetology, and a valuable history of the obscure Genus Carex, by Mr. De Schweinitz. We notice as curious, the fact, that Mr Greville, the celebrated author of the Flora Exotica, and one of the most distinguished botanists of Scotland, appears as a contributor to this volume.

The Medico-Chirurgical Review, and Journal of Medical Science. Conducted by associated Physicians and Surgeons, and superintended by James Johnson, M. D. (No. 17.) New series, No. 1. New-York, reprinted by James V. Seaman, Broadway.

This number completes the re-printing of this Journal up to June 1824. We are happy to learn from the enterprising publisher in this country, that the patronage extended to this Journal is abundantly sufficient to encourage him in continuing its publication. Devoted as this review is, to the analysis of works, to most of which the profession in this country are necessarily denied access, we have always looked upon its republication here as a substantial service rendered to our medical brethren in the United States. The public opinion has already been so decidedly and favourably expressed in relation to this work, that it is unnecessary to add our testimony to the ability and spirit with which it is conducted.

Elements of Medical Jurisprudence. By T. R. Beck, M. D. Professor of the Theory and Practice of Physic, and Lecturer on Medical Jurisprudence in the College of Physicians and Surgeons of the Western District of the State of New-York. Second edition, with notes, and an appendix of original cases and the latest discoveries, by William Dunlop, member of the Royal College of Surgeons, London, of the Medico-Chemical Society, and of the Wernerian Society of Natural History, Edinburgh, and Lecturer on Medical Jurisprudence, &c. &c. London, 1825.

We hope we need offer no apology for presenting our readers with the following extracts from the preface of Dr. Dunlop, to the London edition of this work :

"We do not claim for the present work, the meed of a faultless performance, but we fear not to challenge a comparison of it with any of the English works, in scientific accuracy, philosophical plainness and precision of style, extent of research, genuine scholarship and erudition, pointedness of illustration and copiousness of detail, and reference to original documents. We may say with Dr. Andrew Duncan, Jun. in his excellent review of the first edition, that "under the unassuming title of Medical Jurisprudence, Dr. Beck has presented us with a comprehensive system which embraces almost every valuable fact or doctrine relating to it. Each of its diversified departments has been investigated so minutely, that few cases can occur in practice, in which it will be necessary to seek for further information."* Dr. Male, also, the father of English Medical Jurisprudence, has the highest opinion of the book, and says, "Dr. Beck has recently published one of the best books on Juridical Medicine, which has been compiled in this or any other country." Supported by such unqualified opinions of its excellence, from two of the best Judges of the subject in the empire, Dr. Duncan and Dr. Male, we submit it with confident hopes of its success, to the practitioners and students of medicine and law."

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* Review of Beck in the Edinburgh Medical and Surgical Journal, June 1824.

Lectures on Geology; being outlines of the Science, delivered in the New-York Athenæum, in the year 1825. By Jer. Van Rensselaer, M. D. Associate and Lecturer on Geology to the Athenæum, member of the Royal Medical Society, Edinburgh, &c. &c. New-York, E. Bliss & E. White, 1825.

This work furnishes pretty ample proof of the increasing zeal with which the study of Geology is pursued in this country. It contains a large mass of interesting and valuable matter in relation to the science of which it treats, at the same time that it exhibits an honourable evidence of the industry of its author. In the course of the work there is given a synopsis of rocks, (valuable to students) arranged according to the views of Humboldt, Werner, and Mac Culloch.

The volume closes with a list of fossil organic remains found in the United States, the only one we believe yet published.

Journal Medical de la Gironde. Redigé par M. M. Bonnet, Burguet, Dariste, David, Dupuch-Lapointe, Dupuy, Lartigue, Levacher de Boisville, Leon Marchant, Pereyra et de Saincrie. Tome Troisieme. A Bordeaux, 1825.

We have received, in exchange, fourteen numbers of this Journal, which appears monthly in the city of Bordeaux, and is devoted exclusively to the dissemination of medical knowledge. The numbers in our possession contain a variety of useful and important essays, from which we shall, hereafter, avail ourselves to enrich our foreign intelligence.

An Address delivered March 8th, 1825, in the Hall of the Medical Faculty of Jefferson College, located in Philadelphia. By B. Rush Rhees, M. D. Professor of Materia Medica of Jefferson College. Philadelphia. 8vo. pp. 30.

NOTICE.

State Medical License.—Candidates wishing to obtain licenses to practise Medicine and Surgery, are informed, that the Censors of the State Medical Society for the Southern District will hold their examinations in the city of New-York. They are requested to apply to either of the censors.

FELIX PASCALIS, M.D.
CHARLES DRAKE, M. D. } Censors.
JOHN B. BECK, M. D.

NEW-YORK

MEDICAL AND PHYSICAL

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ART. I. A MEMOIR *upon the* OPHTHALMIA, *which recently prevailed in the army of the Netherlands, by the Chevalier* JOSEPH ROMAIN LOUIS DE KIRCKHOFF, M. D. late Principal Physician to the military hospitals; honorary Vice-President of the Mineralogical Society of Jena; Associate of most of the literary and scientific academies and societies of Europe; Member of the Medical Commission of the province of Antwerp; Corresponding Member of the Academy of Batavia, &c.

[*Translated from the manuscript communication of the author.*]

THE extensive ravages, caused by the prevalence of ophthalmia in the troops of the Low Countries, have attracted the attention of all the medical officers connected with the army, and strongly aroused their zeal to ascertain its causes, and fix upon the most efficacious mode of treatment. From my situation as physician of the military hospital of Antwerp, and from my having charge of all those admitted into it, who were affected with diseases of the eyes, I have been induced to turn my attention particularly to this subject, and am willing to hope that my views will be found to conform to the principles of sound reasoning, as I have strictly endeavoured to found them upon the sure basis of experience.

I shall not attempt to detail the various opinions upon this subject, which have been brought forward at different periods by different individuals attached to the army, but shall merely recall the recollection of a dissertation upon this affection by a Belgian surgeon, published in 1819, in which he considers it as imported into Europe, from Egypt. This opinion has recently received the countenance and support of a Prussian surgeon-general, though strongly opposed by most of the Belgian medical officers, who have written upon the subject, and who attribute it to the close leather stocks worn round the necks of the soldiery.

I am by no means of opinion with those who attribute its origin to the sultry coast of Egypt, neither do I believe that it essentially depends upon the close stocks worn by soldiers, though certainly no enlightened physician can deny that this may be a strong predisposing cause, as any thing, which prevents the free return of the venous blood from the head, may produce a degree of congestion of the capillary vessels of the organ of vision. It does not seem to me possible, that it can be justly attributed to the tight stock just referred to, because the cavalry, who have likewise worn it, have suffered very slightly from the disease, while on the other hand, those who have never worn it, have been severely attacked.

It is an incontestible fact, and one observed by all the medical men attached to the army, that the most frequent cause of ophthalmia among soldiers is the suppression of the insensible perspiration. In consequence, it is found to occur most frequently in armies which are forced to make long marches, exposed to the influence of a burning sun, and who subsequently pass the night in open tents, especially when the eyes are rendered unusually irritable by the dust, or any other external cause. Thus toward the end of July and the commencement of August in 1812, we observed in the French army in its march upon Smolensk, a great number of men, affected with ophthalmia, arising from the dust and heat of the weather, joined to the coolness of the nights. During this period too, the eyes were strongly excited by the reflection of the sun's rays from the sand, and the perspiration was much increased by the rapidity of the march, while the coolness and moisture of the night air, in an open encampment, caused a suppression of the insensible perspiration. From these united causes, the eyes soon became centres of fluxion, and inflammation of course followed.*

I do not hesitate to assert my belief that the ophthalmia, which fell under my observation in the army of the Netherlands, arose from a catarrhal source. That there is a strong analogy between this affection and the Egyptian ophthalmia, I shall not deny; but is not even this a true catarrhal affection? Who indeed can doubt it, after what has been said by the experienced physicians and surgeons who have examined and treated it on the spot?

According to them, the usual causes of the ophthalmia of Egypt are the reflection of the solar rays from the burning sand, and the floating in the air of the fine sand raised by the wind, together with the excessive heat of the day, and the extreme coolness of the nights. In that country, as well as in our temperate climate, the perspiration is liable to be suddenly suppressed by the coolness or moisture of the night, after active exercise during a hot day. The consequence of this suppression naturally falls upon the eyes, from their being already irritated by the strong excitement arising from the light and dust, and active inflammation follows.

I agree with those who believe this disease of Egyptian origin, in considering it of a contagious character. Numerous experiments which I have made upon this point, have strongly confirmed me in the opinion, that it is communicated only by the actual contact with a healthy eye of the matter produced by a diseased one. In this way, large bodies of soldiers contract the affection, by washing in the water which has already been used by a person afflicted with it, by wiping with a towel imbued with the matter, etc. What catarrhal affection, we may ask, is there, which does not present a contagious character, when the morbid fluid produced by it, is brought in contact with the surfaces which are the usual seat of the disease?

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* See my "History of the Diseases observed in the Grand French Army during the campaigns in Russia in 1812, and in Germany in 1813." Second edition. Utrecht, 1822. p. 193.

The difference of opinion with regard to the contagiousness of this disease, has induced me to make a great number of experiments upon the subject; all of which, as before stated, have led me to the conclusion that this affection is communicated only by actual contact. I have oftentimes made those affected with ophthalmia sleep with the wounded, and with those suffering under the venereal and other diseases, but have never seen it communicated in this way. But after having inoculated different individuals with the matter flowing from the eyes of those afflicted with ophthalmia, and although, in doing it, I scarcely touched the edges of the eyelids, and in such a manner that it could not be considered as acting as a foreign body in the eye, ophthalmia followed in one or two days, rarely ever allowing three days to elapse before it made its appearance. M. Hupsch, one of the medical officers under my orders, now in the service of the colonies, in order to show his conviction that it was not contagious, submitted to inoculation, and at the end of twenty-four hours, was attacked with an inflammation so violent, as actually to endanger his sight.

Nevertheless, I shall never be persuaded that the ophthalmia, which committed such extensive ravages among the troops of the Low Countries, arose from contagion. In proof that it arose from a catarrhal source, it is only necessary for me to mention, in addition to what has been already said, that it made its appearance principally in those seasons in which catarrh usually prevails, that is, when the atmosphere is liable to frequent changes, and the weather is cold and moist. Thus it prevailed most extensively in 1816, from the month of March till November. This period was extremely rainy, and the sky continually covered with clouds and fog; the eyes, in consequence, less stimulated by the light, were more susceptible, by their increased irritability, to become centres of fluxion. It should be remarked, that this year, the army was much fatigued by continual exercises. Most of the soldiers were young and unaccustomed to a military life; they wore stocks about the neck, and were compelled to hold their heads in an erect and fatiguing position, which no doubt prevented, in a measure, the free return of the blood from the head, and thus produced more or less congestion about the organs of vision. The active perspiration produced by their usual exercises was often suppressed by the coolness and moisture of the atmosphere, to which they were afterwards exposed.

The patients, who came under my care with this disease, generally stated that the first symptom, noticed by them, was a sensation of itching and burning in the globe of the eye, together with a feeling of fulness and difficulty in moving that organ. This stage was ordinarily accompanied with a slight degree of redness in the conjunctiva, and was followed, more or less promptly, by an increase of the redness, and pain, as well as by a great flow of tears, and painful and indistinct vision. The disease made its first appearance sometimes in both eyes, sometimes in only one; in this latter case, however, the inflammation soon reached the other.

It varied much in point of severity, being intense in some cases, and mild in others. In some instances, its progress was slow, in others, surprisingly rapid. I have seen cases in which the disease made its first appearance, and reached its greatest degree of violence within twenty-four hours.

No particular constitution or habit of body seemed exempt from its attack.

When its commencement was violent, the inflammation appeared at once in the eye-lids, and the conjunctiva of the globe; giving the most acute and lancinating pain, and rendering the slightest impression of the light insupportable. In the grave cases, there occurred more or less fever, according to the severity of the disease.

When it was very intense, and did not readily yield to the usual treatment, it sometimes suddenly became more violent, the inflammation extending to the internal membranes of the eye, and even to the retina. In these cases, the eye-lids were sometimes everted by the swelling of the conjunctiva, and the secretion of tears at first so profuse, became lessened, and even suppressed; the pupil, in consequence of the inflammation of the iris, was contracted, or wholly closed, and the distension of the ball of the eye rendered the pain in that organ and in the head so insupportably severe, as to drive the patient into delirium.

When the disease had reached this degree of violence, which it sometimes did in an unexpected manner, it was by no means rare to see a secretion of pus, or of a yellowish gelatinous fluid in the anterior or posterior chambers of the eye, or between the lamina of the cornea, constituting an opaque spot which injured the vision to a greater or less extent. This high degree of inflammation also produced ulcers of the cornea, which are so liable to leave cicatrices behind them. I have, in some instances, where the disease was of the severest kind, seen it produce a rupture of the cornea.

Treatment. The treatment which I shall now lay down, has been always followed by the most happy success. Out of the vast number of patients who have come under my care, not an instance has happened, where the disease was taken in season, that a cure was not effected without the slightest accident.

In slight cases I had recourse to the most simple remedies only, such as frequent lotions of rain water, or a decoction of mallows, the application of a blister to the back of the neck or behind the ears, bathing the feet, quietness, abstraction of light, and a rigid diet; avoiding every thing which was capable of exciting or keeping up the irritation. By these means, cases of a slight kind were usually cured in a few days.

I several times found that if the warm bath was frequently used the moment the earliest symptoms appeared, the disease might be at once arrested; but if the inflammation was already established, it served only to increase it.

I have often employed emetics with success, immediately upon the commencement of the attack, even when no gastric derangement existed, an occurrence which I have rarely ever met with in this disease. But if the inflammation has already reached the second stage and is pretty severe, emetics, accord- to my experience, will prove injurious, notwithstanding the opinions of those who have recommended them in this affection.

If the disease assumes a grave character, and has reached an acute state of inflammation, I employ, without delay, the most active means for reducing the inflammation, especially if it extends to the interior of the eye, because in this case purulent ophthalmia, capable of producing a disorganization of the eye, or causing other changes sufficient to destroy the power of vision, is to be feared.

During the inflammatory stage, I endeavour by all possible means to remove every thing which can aid in keeping up a state of irritation. To avoid the impression of the light, I shut the patient up in a darkened chamber, well aired and cool, for a warm atmosphere increases the inflammation; I prescribe a most rigid diet, and recommend quiet and repose, with the head elevated.

I then have recourse to copious blood-letting, proportioned to the violence of the disease, and the strength of the patient. The blood should be drawn from a large orifice, in order that the depletion should be as instantaneous as possible. Experience proves that in this mode, it produces its effect most promptly and efficaciously.

In the acute stage, I bleed boldly, and repeat the operation as long as the severity and continuance of the disease require it.

In addition to this, I give cooling purgatives, as cream of tartar, etc. and make use of warm baths to the feet, in which powdered mustard has been mixed, at the same time applying blisters to the arms,* and cloths moistened with a cold decoction of mallows to the eyes, and make refrigerent applications to the head, such as bladders filled with iced water, etc. To prevent the retention of acrid tears, and to hinder the gluing together of the eye-lids by the matter discharged, a thing which ought not to be lost sight of in this disease, I direct the eyes to be repeatedly moistened during the day with a sponge wet with the decoction of marsh-mallows, and in some cases to be carefully injected, by throwing the decoction in between the lids and the ball of the eye. I would remark here, in passing, that in the acute inflammatory stage, emollient fomentations and cataplasms, so inconsiderately recommended, are very injurious; they not only aggravate the inflammation, but they encourage and bring on a purulent state. We should be cautious too, at this period, in using those ointments, etc. so pompously cried up as anti-ophthalmic, as well as all kinds of collyria, in which the acetate of lead, the sulphate of zinc, opium, or any other irritating substances enter.

With regard to blood-letting, I would observe, that the abstraction of blood from the arm or foot, does not seem to me to produce so prompt or efficacious a result as when it is drawn from the neighbourhood of the inflamed part, as from the jugular vein or the temporal artery. When there is no obstacle to prevent, I have always preferred the former, and have never known any accident result from it. This mode of bleeding has never, notwithstanding the opinions which have been brought forward to the contrary, appeared to me that in arteriotomy, the compression which is so frequently necessary to stop the discharge of blood, is liable to create a considerable degree of irritation in the immediate vicinity of the inflamed organ. If I should decide, however, to adopt this mode, I would do it, as is usually recommended, on the side of the affected eye, or on both sides if both eyes were affected at the same time; I would avoid as much as possible, the loading the head with bandages and compresses, or other applications which would have a tendency to increase the heat.

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* In the acute stage of severe ophthalmia, blisters should be applied to parts at some distance from the head; if applied to the back of the neck or to the temples, they increase the inflammation.

When the inflammation is not very severe, or sometimes after blood-letting in severe cases, I direct the application of leeches to the temples; if applied to the eye-lids or too near the inflamed part, they increase the irritation. Their application about the eye in the acute stage of ophthalmia as is often done, is a bad practice; it is only in cases where the conjunctiva is swollen and puffed out, or when the inflammation is losing its acute character that their employment about the eye-lids is indicated.

When the violence of the disease is calmed, and the acute inflammatory stage passed over, if there is tumefaction of the conjunctiva, repeated scarifications of the membrane usually, though not always, succeed in reducing it. They fail generally in those cases in which eversion of the lid is present, in these cases it is sometimes necessary to remove a part of the conjunctiva in order to remedy this deformity.

As soon as the acute inflammation is overcome, as adhesions of the iris are very liable to be formed at this period, I direct a special degree of attention to this part. If it is strongly contracted, as is the case when the inflammation is transmitted to the internal parietes of the eye, I apply compresses wet with a strong infusion of belladonna, stramonium or henbane, in order to dilate the pupil and destroy any adhesion which the iris may have contracted. With the same intention, I often at this period prescribe the use of belladonna or stramonium internally.

We should be cautious when the disease has lost its acute character, not to debilitate the patient any farther. We shall know when this period arrives by the cessation of fever, if any has been present, by the diminished redness of the inflamed conjunctiva, by the more natural appearance of the eye-lids, by the diminution of the pain, and by the change in the matter discharged from the eye, it being less acrid, more abundant, and thicker. I then put the patient on a more tonic regimen, taking the precaution to increase his food very gradually, and directing him to wash the eyes frequently with some weak aromatic infusion, as that of elder flowers, mint, etc. To these lotions, I add a little laudanum or aqueous extract of opium. If the irritability of the eyes is very great, I often use, with advantage, an infusion of hemlock, digitalis, or hyoscyamus. In a chronic state of ophthalmia attended with great irritability, I have employed the laurel water (Prunus lauro-cerasus) in the form of a lotion, with remarkable success. One part of the laurel water, with two of rain water, has had in my hands an excellent effect.

When the disease has reached an asthenic or chronic state, attended with great general debility, I prescribe a tonic course, making use of bitters and sometimes cinchona in decoction or infusion.*

In cases of obstinate chronic ophthalmia, I have often seen great benefit result from the insertion of a seton in the neck, as well as from the use of collyria, containing a small quantity of tartrite of antimony, corrosive sublimate, white vitriol, alum, etc. to which I join laudanum or the extract of opium. When there is a considerable relaxation of the conjunctiva, or when leucoma exists, or ulcers of the cornea, or of the tarsi, of the carunculæ lachrymales, or the Meibomian glands, I have often derived advantage from mercurial frictions upon the temples, and the use of calomel internally. In the same cases, I have found the introduction between the eye-lids two or three times a day, of a small quantity of an ointment composed of lard and the white precipitate of mercury, to which a little aqueous extract of opium had been added; and in order to increase still further its stimulant effect, after the eye has become habituated to it, I add after a few days, a small quantity of corrosive sublimate.

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* Cinchona is indicated and employed in cases where the ophthalmia assumes an intermittent character, in the same way as in ordinary intermittent fever. I have met at Antwerp, where this variety of fever is very common, with several such cases of ophthalmia, and have always succeeded in curing them by the use of cinchona, uniformly taking care to reduce the inflammation as long as it possessed an acute character.

As patients recovering from ophthalmia are extremely liable to relapse, I take great care during convalesence, to render the exposure to the impression of the light very gradual.

ART. II. *On the* EPIDEMIC PURULENT OPHTHALMIA *which appeared recently in the western part of the State of New-York.* By C. B. COVENTRY, M.D. of Utica, State of New-York.

PERHAPS there is not in the animal economy any individual organ, with the exception of those immediately essential to life, which lays higher claims to the attention of the philosopher and surgeon, than that of vision.

Whilst the delicacy of its structure, and the peculiarity of its functions, call forth the admiration of the one, its importance, its exposed situation, and its peculiar liability to disease, demand the most serious attention of the other.

In the long catalogue of diseases to which the eye is subject, the different species of ophthalmia hold the most conspicuous rank, not only from their frequency, but from their destructive effect. Indeed, inflammations in some of the membranes or appendages of the eye, precedes almost every disease to which this organ is liable.

As the consideration of the various species of ophthalmia would require a discussion too long for the present occasion, I shall confine myself to the consideration of one, which, as far as I can learn, has hitherto been little known in this country, but which from its late appearance, the violence and rapidity of its course, as well as from its destructive effects, demands our attentive consideration.

This disease may be found described by European authors under the head of Egyptian ophthalmia.

That it is the same which has appeared in this country, is evident not only from its correspondence with the description given of that disease, but from the assertion of a medical gentleman of respectability, who had an opportunity of becoming acquainted with the disease as it existed in the British army, as well as in this country.

A person unacquainted with the disease under consideration, might mistake it for what is usually described by authors as gonorrhœal ophthalmia, but a careful examination of the circumstances connected with its propagation, as well as the rapidity of its course, will usually be sufficient to distinguish them, and this distinction is of the utmost importance, as will be seen in the treatment.

It also, in appearance, bears considerable resemblance to the purulent ophthalmia of infants; but the one is confined almost entirely to infants, and attacks none but the weak and feeble, whilst the other attacks indiscriminately all ages and constitutions, and indeed seems to show its most malignant forms in the plethoric and robust.

The first account I have been able to find of this species of ophthalmia, is after the Egyptian expedition in 1801; and under the supposition that it first originated in that country, it was called Egyptian ophthalmia.

All the causes of ophthalmia arising from soil and climate. certainly exist in as great, if not greater degree, in Egypt, than in any other country; and perhaps in no other countries on the globe, is ophthalmia so common a disease. The great heat of the day, followed by cold, damp nights, is considered the most fruitful source of the disease. But whether they actually give origin to it, or only aggravate it when already existing, is still a question. Veitch and Farrell seem of the former opinion, whilst Dr. Frick of Baltimore, in his late work on the eye, says, "There can be no doubt that it was not only known in the schools in Europe, but was epidemic long before 1801;" and he even goes so far as to assert that the soldiers often produced it by applying irritants to the eyes, and quotes Larry and other French writers as authority. But whatever may be its origin, it is evidently propagated by contagion, in this respect differing, as far as I am acquainted, from every other species of ophthalmia.

In the proem of the London Medical Journal, No. 42, is the following remark :

"Dr. Veitch considers that ophthalmia may first arise from atmospheric influence, and afterwards be propagated by contagion, by the matter formed being communicated from the eyes of the diseased to those of the healthy. A proposition which he has satisfactorily and originally established in regard to the ophthalmia acquired by the British troops in Egypt at the commencement of the present century, and afterwards propagated in several parts of England and Ireland, when the soldiers affected with it were dispersed on the return of the army."

Dr. Farrell treating of the same subject, "thinks the peculiarities of the soil and climate of Egypt are sufficient to account for the prevalence of the disease in that country, and he admits, or seems to admit, that this combination of causes may contribute to the production of a species of ophthalmia, which by frequency and inveteracy, or other means, may acquire the power of propagating itself by contagion.

"It is admitted that the ophthalmia here treated of, and which the most positive evidence does not permit us to doubt, arose in Egypt, is contagious.

"Whether it be a disease *sui generis*, having qualities peculiar to itself, specific and contagious, *ab origine*, or whether the accumulation and concentration of morbid atoms, elicit or generate a contagious material, is not of much importance as relates to practice."*

That the above seems to have been the general opinion in England, and particularly with the army surgeons, is sufficient to establish the contagious nature of the disease as it then existed, and the little experience which we have had, will not warrant us to hope that it is less so in this country.

Of a family consisting of seven or eight persons, every individual had purulent ophthalmia. Several of the most intimate neighbours were attacked before they were aware of its contagious nature.

By establishing a non-intercourse, a check was fortunately put to its progress. This family supposed they caught it of a friend who came from the State of Ohio.

The disease usually commences with a sense of uneasiness in the eye, and an intolerance of light; there is little pain at the beginning, if the eye is kept perfectly still and excluded from the light, but a sensation as if there was sand in the eye. If it be carefully examined, the conjunctiva lining the palpebræ will be found red and inflamed; but instead of the smooth appearance usual in inflammation of this membrane, it is rough and granulated, which at this period is the most distinctive character of the disease.

At this time, the conjunctiva covering the ball of the eye is scarcely affected. But if the disease is permitted to go on, or the most active measures are not used to arrest its progress, the palpebræ becomes much swollen, a puriform discharge takes place from the diseased organ, the inflammation extends to the ball of the eye, and the patient complains of severe pain in the orbit and forehead.

In some cases the attack is more severe, and the patient is seized with pain at the commencement of the disease.

As it continues its progress, the above symptoms become more aggravated, the swollen lids become everted, or so united as to be opened with difficulty. If the cornea can be at all seen, it is found cloudy and bathed in purulent matter.

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* London Medical Journal, Vol. XXV.

The pain is most excruciating. If a ray of light happens to fall on the retina, the patient starts as if a sharp instrument had been thrust into the eye. The integuments about the eyes and forehead are inflamed, the pulse becomes quick and hard, skin dry, great thirst and other symptoms of fever appear, the agony of the patient becomes almost indescribable, he is unable to rest day or night, neither can he remain long in one position. In cases where the tarsi come in contact, the purulent matter is pent up for some time within the eye-lids, in others where they are separated, it flows out mixed with tears, and is so acrid as to irritate the eye exceedingly.

If the cornea can now be seen, it is found studded with small white spots, which are the commencement of ulceration. These gradually increase in size or unite, the whole cornea enters into suppuration, the iris is laid bare, the lens and vitreous humour are protruded, and not even the form of the eye remains.

If, however, the ulceration be small, and penetrates deep in the cornea, the latter bursts, the aqueous humour escapes, and the orifice is stopped by the procidentia iridis. As the whole compages of the eye, locked in the orbit, are much compressed from their distention, and are excessively painful from the delicacy of their structure, this bursting of the eye which is usually dreaded, is followed by almost immediate relief. The inflammation gradually abates, and is sometimes followed by a partial restoration of the organ.

The disease is not, however, always so destructive in its effects, and frequently terminates with an obstinate opacity, and thickening of the cornea.

The extreme sensibility to light, and the great pain on exposure, is probably owing to the motion of the ball in the socket, and is easily accounted for when we consider the distended and inflamed state of all its parts, which is probably itself one cause of pain.

May not the opacity of the cornea, which is so common a sequel of this disease, be owing in some measure to the pressure on the cornea, by the same distention? As it is a fact which has been sufficiently established by Barclay and others, that pressure will have that effect.

The disease varies considerably in the rapidity of its progress. In some cases, it is said that ulceration of the cornea has taken place within ten or twelve hours from the commencement of the disease; in other cases, some days elapse.

Those who are subject to sore eyes, and those who have weak eyes, evidently suffer more than those who have strong and healthy ones. The disease, if not more violent, is thought to be more obstinate and difficult of removal in persons of a scrophulous habit.

As the disease is evidently of a highly inflammatory nature, and the organ concerned can suffer no derangement in its structure without manifest injury to its functions, our first and great aim must be to produce a termination by resolution, and this we may reasonably hope to do if called within forty-eight hours after the commencement of the disease; but such is the tendency to ulceration, that our best directed efforts frequently fail when it goes over that period.

Venesection *ad deliquium*, opening one or both temporal arteries, as one or both eyes are affected; leeches to the eyes and temples, cupping the temples, drastic cathartics, blisters, cleaning the eye frequently by injecting warm water, or milk and water between the lids, and keeping them covered with a pledget wet in diluted liquor plumbi, constitute the treatment universally recommended by the English surgeons. The French, on the contrary, recommend bleedings of twelve and sixteen ounces, repeated if necessary, and followed by a mild cathartic.

It is evident no precise rule can be given, but that the surgeon must be governed by the constitution of his patient, the violence of the disease and other circumstances connected with the case. There can, however, be no doubt that the treatment of the English corresponds best with the customs, habits, and constitutions of our citizens. I have known a patient labouring under this disease lose between fifty and sixty ounces of blood the first sitting, and this repeated until he lost one hundred and fifty, or before the disease was subdued. This man recovered more rapidly and more perfectly than any other within my knowledge, who had it equally severe. It has been objected to depletion from the temporal arteries, that from the facility with which arteries conform themselves to their contents, it produced less effect than the same quantity drawn by cupping or leeches.

There is undoubtedly an advantage in drawing the blood from the neighbourhood of the diseased organ, and if a sufficient quantity can be drawn from the eyes and temples, it is evidently better than from the arm, but we should endeavour at all events to make a decided impression on the system. As time is of the utmost importance, it will not do to wait and try the effect of blisters, collyria, &c., before we resort to depletion. After bleeding, we should administer an active cathartic, blisters should be applied behind the ears, or to the back of the neck, or both, according to the violence of the disease.

The eyes should be frequently cleansed by injecting with care some tepid lotion under the lids, kept cool by the application of a solution of cerus. acetas, and the patient excluded from the light.

If the pain and inflammatory symptoms do not abate within eight or ten hours, we should repeat the venesection.

If there is any ulceration present, it will be necessary as soon as the inflammatory symptoms abate, to apply the hydrar. ung. nitrat. reduced, or some similar ointment, to check its progress. If small ulcers still remain on the cornea after the inflammation is entirely removed, they may be touched with a pencil of argent. nitras in substance.

It not unfrequently happens that the conjunctiva of the palpebræ remains thickened and ulcerated long after all symptoms of inflammation are gone. In such cases it has been recommended to remove it by excision, but we can usually succeed in removing it by everting the lids, and making a free application of the nitrate of silver, which is preferable to removing it with the knife or scissors. The lids should be carefully washed before they are returned to their place, and this application repeated every day until the granulations are entirely removed.

In cases where the ulceration has penetrated through the cornea, and there is a prolapsus of the iris, it will sometimes spontaneously recede, in others it remains or forms adhesions to the cornea. Protrusion of the iris is known by the appearance of a small dark tumour, which varies from the size of a pin's head, to that of a small pea ; and from the appearance of the pupil, which is always distorted and drawn in a direction towards the tumour. The patient complains of a sensation similar to that when there is some extraneous substance in the eye.

When the tumour is large, a portion may be clipped off with the scissors, and the remainder reduced with caustic, but when small, we should trust to the latter alone. A pencil of the argentum nitras is the best ; it should be cut to a small point, and the prolapsed iris frequently touched with care until it is reduced below the level of the cornea.

One of the most frequent and troublesome terminations of this disease is the thickening and opacity of the cornea.

The cases which I have had an opportunity of witnessing, were what Frick terms leucoma, and consist in the formation of a pseudo membrane.

The opacity is sometimes circumscribed, and covers only a part of the cornea. In others it affects the whole cornea, and vision is totally destroyed. If the patient is not completely blind, he always sees best in the twilight, or in an obscure room, on account of the pupil being expanded, and a greater number of rays of light being permitted to reach the retina.

There is no affection of the eye for which we have a greater variety of prescriptions, than for opacity of the cornea ; and perhaps few affections in which we so frequently fail of success. It is probably owing in some measure to this frequent failure that the number has been so multiplied. In addition to this, it is found that there is no single application, however beneficial at first, which does not lose its power by use; hence results the necessity of frequently varying our remedies.

If the opacity is but slight, we should commence with some slightly stimulating collyrium, as a solution of argentum nitras, or perchloride of mercury, half a grain to the ounce of water. When the patient is nearly or wholly blind, the opacity of a dull white or pearl colour, we shall be compelled to resort to stimulants of a more active kind.*

They should be applied with a hair pencil, and only to the part affected, as they would produce too much irritation if applied to the whole eye. Powdered glass was at one time recommended to be blown into the eyes in cases of opacity, but this is now justly reprobated.

It should be remembered, that the object is to produce only temporary excitement, otherwise we might by producing inflammation, rather promote than remove the disease.

It not unfrequently happens that the opacity is kept up by a varicose state of the blood-vessels ramifying on the conjunctiva. I have even been able to see them distinctly with the naked eye traversing the opaque cornea in every direction. When this is the case, or the veins of the conjunctiva seem any way engaged, they should be carefully divided, and the operation repeated as often as they appear united.

Should we not succeed by these means in removing the opacity, we should unite an alterative course of mercury to those already recommended.

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* ℞ Mercur. sublim. corros. gr. j. opii colat. gr. viij. solve in aqua rosar. oz. ij.

℞ Liquor. ammon. caust. gtt. x olei nuc. jugland. oz. semis.

℞ Adipis suillæ præparatæ ʒss. Tutiæ præparatæ Bol. armen. ℥ij. calcis Hydrarg. Alb. ʒj. misce.

The gall of the ox, sheep, &c.

Art. III. *Cases in* morbid anatomy. By A. L. Peirson, M. D. of Salem, Mass.

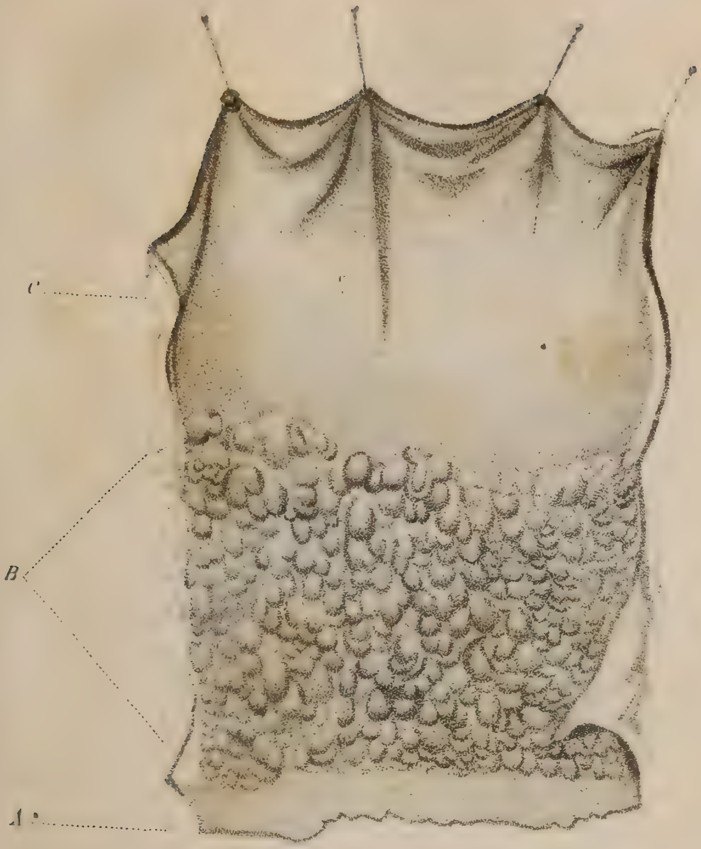
Diseases of the Rectum.

A gentleman forty-five years of age, of temperate habits and sedentary employment, about four years ago, was affected with symptoms which he considered to be those of hæmorrhoids. He had pain in the back, difficulty of passing his stools, and a discharge of blood per anum, sometimes very profuse, which was always followed by a sensation of relief. He had occasional attacks of severe pain and constipation of his bowels, which he supposed arose from bilious derangement, and which were relieved by the use of opium and powerful cathartics. About two years since he applied for relief at the Massachusetts General Hospital. After an examination of his case, it was considered incurable, and nothing was attempted by way of cure. He was directed to the use of extract of conium, of which he took an incredible quantity, without any marked effect and quieted the pain, which occurred more and more frequently and intensely, with large doses of opium in the form of black drop, of which he used many pounds during the last year of his life. Previously to his death his bowels became constipated, and the most powerful means used to procure stools were without effect. Among these may be mentioned the use of extract of stramonium, six grains of which were used as a suppository, and produced the most powerful relaxing effects which lasted many hours, but brought away no stools.

His death took place April 4th, 1825, having had no stool for the last twelve days. His stomach never became irritable, and his appetite and capacity to take food remained to the last. He was attended throughout his disease by my friend Dr. Parker of this place. I examined him minutely but once, when I was consulted in his case some months previous to his decease.

Examination of the body eighteen hours after death. Abdomen very tumid: in opening the integuments a small opening

Plate 1



The drawing represents. The lower portion of the rectum slit open

A The intestine below the tumour and just above the sphincter in a state free from disease but contracted by the alcohol.

B The diseased part

C The intestine above the tumour healthy in texture but much enlarged

was made in the bowels, from which a large quantity of flatus was discharged. The intestines were but little altered in colour, some streaks of inflammatory action were apparent. They were distended beyond their usual size. The colon was prodigiously enlarged, being equal in any part of it, from the caput coli to the rectum, to the ordinary capacity of the stomach. The ascending portion on the right side, reached to the liver, and was connected to that organ by organized lymphatic matter; it was also connected along the arch, by similar adhesion to the omentum and stomach. The internal appearance of the colon and cœcum was natural; and even at the valve of the colon, where morbid appearances are frequently present in chronic diseases of the viscera, there was no mark of diseased action. An examination of the rectum discovered the seat of the disease which could be plainly felt during life by examination, per anum, and which by affording a mechanical obstruction to the passage of fæces, was the cause of the intense pain suffered during life, and ultimately of death. The alteration of structure commenced about two inches from the orifice of the anus, and extended four inches farther along the rectum, occupying its whole circumference with a mass of soft fungous excrescences resembling papillæ; the whole appearance being similar to that represented as belonging to the cauliflower excrescence of the uterus. The obstruction of the bowels was very complete, being much like that which would take place from filling so large a portion of the rectum with soft sponge. The prostate gland and urinary bladder were healthy, and there had been no symptoms during life, indicating disease in any organ in the neighbourhood of the rectum.

The drawing representing this tumour, taken by my friend Mr. J. Webb, from the preparation of the diseased parts in spirit, shows the well defined and limited extent of the disease. A small portion of the rectum in a healthy state is seen below the tumour, and above, the line between the diseased and sound parts is perfectly distinct. The prominences are not represented in this drawing in sufficiently bold relief. This case is in all respects essentially different from scirrhus, and in its soft and delicate texture, more nearly resembled some of the excrescences formed upon the internal surface of the uterus. A case related by Morgagni resembles it in many respects; but in that case there were ulcerations extending to the skin of the anus.* There are two circumstances particularly worthy of remark in this case; the first is, that such intense pain, and so much distention of the bowels should be accompanied by so little inflammatory action; and the second, that the stomach should sympathize so little in the diseased actions of this portion of the alimentary canal. This last circumstance would lead us to think that the stomach has less sympathy with this, than with other portions of the canal, since in strangulated hernia and ileus, the vomiting is so prominent a symptom.

Malignant Fungus.

June 14th, 1825. A little girl four and a half years of age was placed under my care. She had been living in the country, and had declined in her health for about six weeks, during three of which an extraordinary tumefaction of the abdomen had been observed. I found the belly enlarged by two distinct tumours, one occupying the epigastric region and extending to the umbilicus, the other lying in the pelvis, and rising out of it in the manner of the uterus during gestation. Both tumours were moveable. The countenance was pale and pinched, the body somewhat emaciated, the tongue clean, the appetite irregular, but for the most part sufficiently keen. There was but little pain complained of at the time. The urine was for the most part healthy, but occasionally mixed with blood. and small strings of fibrous matter which passed with difficulty. The parents of the child had not been subject to scrofulous diseases. An unfavourable prognosis being made to the parents, thirty leeches were applied to the tumours, and the child was directed to take the following mixture.

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* Morgagni de sed. et caus. morb. xxxii. 7.

℞ Sol. Muriat. Calcis. ℥i.
Tr. Muriat. Ammon. et Ferri. ℥ſs. M.
ʒi. ter in die sumend.

It was ordered to rub the abdomen night and morning with the following ointment.

℞ Hydriodat. Potass. ʒi.
Ung. Simp. ℥i. M.

A diet of milk and farinaceous articles was prescribed, and the child was ordered to be plunged in cold sea water every forenoon. The treatment was continued for twelve days, during which time the tumours enlarged rapidly—the appetite diminished—the bowels, which had heretofore been regular, or responded to small doses of castor oil, or mild enemata, now became constipated, œdematous swellings occurred about the fundament, and the lower extremities swelled. There was frequent desire for micturition, and ineffectual efforts at stool. The bathing was now discontinued, the strong mercurial ointment directed for the bowels, and a brisk purge administered; the operation of this was followed by a more comfortable state, and it was repeated on the next day but one. The chalybeate was omitted, and a cordial diet allowed. The size of the tumours continued to increase, and the patient's strength to diminish, till the 3d of July, when she died.

Sectio cadaveris four hours after death. The cavity of the abdomen contained a few ounces of serum, in which floated flocculi of lymphatic matter. The viscera, in situ, exhibited the following appearances. The omentum devoid of fat, was thickened, of a deep red colour, and adhering to the intestines in the neighbourhood of the diseased growth. Nearly opposite the umbilicus was a diseased mass, occupying the mesentery of that portion of the ileum immediately connected with the cœcum, lying flat upon the spine, and involving a duplicature of the bowel; in size it was rather more than could be covered with the hand. On removing the omentum and lifting up the tumour, a portion of the bowel gave way, and a quantity of foul dark coloured fluid issued from an irregular disorganized cavity, which opened into the bowel, and exhibited no appearance of common ulceration. The bowels, where they were in contact with the tumour, exhibited an uniform structure with the tumour itself, which was firm, white, and moderately hard. In those parts which approach nearest to the cavity before mentioned, which for want of a more appropriate title, we called an abcess, the texture of the tumour was less consistent, and when cut into, exhibited a dark brownish appearance. The mesenteric glands generally were enlarged in a small degree.

Another tumour was found occupying the whole cavity of the pelvis, and involving the uterus, bladder, and rectum. A small hole in the fundus of the bladder communicated with the interior of the tumour, and a round substance of a dark colour and fibrous structure as large as a chesnut, was found loose in the bladder. This inferior tumour was in structure like the preceding, except that when cut into, it exhibited only the whitish appearance of the medullary substance of the brain, and was more solid. The two diseased masses had no connexion with each other. The stomach, liver, spleen, and pancreas, were healthy; the lungs exhibited no marks of disease, and were entirely free from tubercles. A small tumour similar to the preceding, was found on the thoracic side of the diaphragm.

REMARKS.

The unusual occurrence of this disease, not allowing us frequent opportunities for discrimination, we were induced to consider it at first as a scrofulous affection. Enlarged mesenteric glands, particularly if attended with worms and accumulation of fæces, and tuberculated accretions upon the peritoneum, would have produced some of the symptoms, but its rapid progress alone, there being no appearance of a suppurating process, gave sufficient evidence of its malignant character sometime before death. It will probably be considered medullary sarcoma, but it had more firmness and was destitute of the hemorrhagic character which that tumour possesses in other structures; and it had also a property which is possessed by carcinoma, and which is supposed to distinguish that affection from the one in question, viz. that of producing a degeneration in neighbouring structures by which they are all converted into a uniform mass. Mr. Abernethy expresses the result of almost every surgeon's experience, when he says, "these diseases (tumours) resemble colours in this respect, that a few of the primary ones only can be discriminated and expressed, whilst the intermediate shades, though distinguishable by close attention and comparative observation, do not admit of description or denomination."*

ART. IV. REMARKS *on* AMPUTATION. By NATHAN SMITH, M. D. Professor of the Theory and Practice of Physic and Surgery in Yale College.

IT is not my present purpose to give a history of amputation, or to point out the various improvements which have been made in that operation by different individuals, but to contrast the method which I have adopted with the present mode. I say the present mode, for, as far as I know, amputation is performed generally in a similar manner throughout the United States and Europe, which is as follows: The tourniquet being fixed on the limb, the operator standing by the side of the patient, with an assistant, who draws up the flesh, so far as to straiten the skin with a long straight-edged knife, makes a circular incision around the limb through the skin and cellular substance down to the muscles. He then separates the adipose membrane from the muscles with the scalpel, and folds it back on the skin, and in this manner lays the muscles bare to a certain distance above the place where the skin was divided. He then cuts the muscles down to the bone, as high up as they are laid bare, and having again separated the muscles from the bone to a certain distance above where the muscles were cut, retracts the soft parts, and saws off the bone, as high as the muscles have been separated from it. The arteries being tied, the soft parts are brought together and secured by sticking plasters.

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* Surgical Works, Vol. II. p. 106. Lond. ed.

This I believe to be substantially the mode of operating in this country, and when the operation is nicely performed, and a due proportion of soft parts is preserved to cover the stump, and well secured, the cure is effected in a short time, and the stump is a pretty good one. But in an operation of so much importance, and attended with such serious consequences to the patient, as amputation, every circumstance which can render the operation less painful, or effect a cure with less inconvenience, or obviate with more certainty the accidents that occasionally produce a bad stump, deserves attention.

The objections to the present mode of amputation, as I have above described it, are, 1st, that in the most perfect operations, where the soft parts are brought together, so that the edges of the skin on the opposite sides meet each other, the stump will be angular, that is, there will be two projecting portions of skin, one on each side of the limb, which give it a disagreeable appearance, and when healed, will render it liable to excoriation and inconvenience from an artificial limb.

2d. As the skin and cellular substance are to a certain extent separated from the muscles, and project or fall below the cut muscles, the end of the bone will be covered sometimes by the skin, and cellular membrane only.

3d. As there can be no rule given for the length of the soft parts, which are to be preserved to cover the end of the bone, which will apply to limbs of different sizes, it must be left to the surgeon, whilst operating, to judge how far he will separate the skin from the muscles, and the muscles from the bone. And as a large limb will require much larger flaps to cover the stump than a smaller one, it happens occasionally that in large stumps the bone will project, whilst in small and emaciated ones, the soft parts will fall too far below the bone, and form a kind of *pouch*, which is sometimes filled with matter during the cure. Charles Bell acknowledges that such accidents frequently happen in the hospitals, and I have known them in private practice.

Now a method of operating which will with certainty obviate all these unpleasant circumstances, that will form a round and seemly stump, without any projecting angles of the soft parts; that will cover the end of the bone, not only with skin and cellular substance, but with muscles, and will also preserve just the length of the soft parts requisite to cover the stump without straining, or without any superfluous portion, should undoubtedly be preferred.

The following method I have found to possess all the advantages above stated.

Having fixed on the part where the operation is to be performed, let the operator take a piece of paper of sufficient length to encircle the limb, and four or five inches in width, and apply it around the limb, so as to obtain the exact measure of it, and all the superfluous length should be cut off. It should then be folded, and the ends of the paper laid together upon a table, and a semi-circular arc drawn with a pair of dividers, by placing one leg upon the middle of the lower side of the paper. The paper cut off upon this line will form two equal semi-circles; and when placed upon the limb, will describe two semi-circular arcs, meeting at two angles. These lines should be marked upon the limb with ink or crayon.

Then whilst an assistant draws up the skin so as to straiten it moderately, the operator with a short knife having an edge on the convex side, passes his hand under the limb and fixes the point of the knife on the side farthest from him at the angle where the two semi-circular lines meet; with the edge of the knife turned obliquely upward, he cuts in the direction of the line through the skin, cellular substance and muscles down to the bone, with repeated strokes. Thus having divided one-half of the soft parts of the limb, he passes his hand above the limb, and fixes the point of his knife on the angle where he began, follows the line upon the upper side of the limb till it meets his first incision. He will then have two semi-circular flaps, composed of all the soft parts connected by their natural adhesions; these are to be turned back, a retractor applied, and the bone sawed off. After the arteries are secured, the flaps are to be brought together and secured by sticking plasters. If the operation is performed in this manner, the time taken up will be a little less than in the common method; for there is no skinning up of the adipose substance from the muscles, and no necessity of cutting with a guarded stroke, to prevent cutting the muscles. I generally endeavour to cut through the cellular membrane into the muscles, the first stroke, and then follow this incision down to the bone.

In this operation, if the method I have described be followed, the soft parts will be in exact proportion to the stump; for by measuring with the paper, and marking as above directed, the flaps will come together with mathematical exactness, whatever the size of the limb may be, for their length must be in proportion to the size of the limb.

The soft parts will therefore come together without stretching, and will be easily retained in their places. The stump formed in this manner is covered not only by adipose substance, but by muscles, and is better cushioned with flesh, and from repeated opportunities of comparison, it is well ascertained that such stumps are more calculated to accommodate the machinery of an artificial limb.

There is still another advantage in this mode of operating, which is, that it is often in the power of the surgeon to save a greater length of limb than could be done in the common mode; for where the skin is diseased, being ulcerated or having fistulous openings in it, I have frequently made my incisions in such a manner, as to bring the diseased part of the skin in the angles between the semi-circular lines, having the flaps extend some ways below; so that an inch and a half of stump has been saved, which would have been lost by the circular incision; and as a general rule, it may be observed that the longer the stump is, the more useful it is to the patient. And if I am not mistaken, the patient experiences less of those spasmodic twitches of the muscles and tendons after my operation, than are usually consequent upon the former method. This I attribute to the circumstance of a greater length of muscles being left projecting below the bone, connected by their natural adhesions; so that when brought together, and retained by adhesive plasters and cross bandages, they are secured and kept steady by pressure.

The operation I have described can be performed with any knife that has a sharp edge, but the knife in common use is not so well adapted to this mode of operating as another form, and if any surgeon will make the experiment, it will be found that the knife, which I have delineated, will be found more convenient even in making the common circular incision around a limb, than the long straight-edged knife. Being shorter, the hand has a more perfect command of it, especially its point. The convexity of its edge likewise renders less force necessary to cut through the flesh. The desire, which some operators seem to have, of cutting a great deal at one stroke, arises from want of experience; for in fact it makes no difference whether we cut all together with a drawing stroke, or whether we push the knife in a contrary direction; if the edge is perfect, the operator will find no difficulty in dividing the soft parts on account of the shortness of his knife, and the shape which is delineated in the plate is better adapted to cut the angles marked out on the limb than any other form.

I have given a drawing of a limb with the semi-circular lines made on it, appearing as they do before the operation is commenced. In amputating the thigh, I generally make the angles on the outer and inner sides as marked on the drawing, except in cases where I operate so high up as to have the artery exactly on the inside of the thigh; in that case I make the angle a little above or below the artery, so that the artery may not come directly in the angle between the two flaps, which might render it a little more difficult to take up; although this has happened to me, and the artery was secured without difficulty; or if there should be any disease in the soft parts, so situated that by making the two angles in a different part, more length of stump can be saved, they should be placed differently, for it does not make much difference in amputating a thigh where we make the angles.

In amputating the leg below the knee, the angle should be made the one anteriorly, and the other posteriorly; for if the angles are made as in the thigh, the one on the inner, and the other on the outer side, when the flaps are brought together, the flap on the anterior part of the leg will fall over the sawed edge of the tibia, which will be apt to cut through it.

This happened in one case where I operated in this manner; but by making the angles one anterior and the other posterior, the flaps will approximate in a very easy and handsome manner, and the diameter of the leg is less from right to left, than from before backward.

The mode which I have recommended for the amputation of all the limbs, has been practised by Charles Bell, in amputating the fingers, toes, and also the fore-arm. In amputating the fore-arm, one angle is to be formed over the radius, and the other over the ulna. In amputating above the elbow, the angles and flaps may be adapted to the circumstances of the case or convenience of the operator, who will always find it most convenient to stand so as to have his left hand towards the upper part of the limb; therefore, when he operates on the right arm, he will stand behind the patient; and when he operates on the left, he will stand before him.

The sticking plasters I have used have been applied differently from the common method; instead of applying them in large strips, I cut them in the following method; take a strip fifteen inches in length, and two in width, and by doubling it in the middle, divide it in the manner represented in the plate.

In applying a strip, the shoulder should come within half an inch of the cut edges of the skin; and the corresponding one in a similar manner on the opposite side; draw the tongues of the plaster across the stump till the edges of the skin are brought together; when they are to be secured. This mode approximates the edges more closely than is done in the common manner, and is equally applicable to all cases where the object is to unite divided parts by sticking plasters.

This mode of amputating I have followed for the last twenty years, during which time I have performed the operation a great number of times; and during that period, have never had a bad stump, or any trouble about the length of the flaps.

Lately, some improvements have been made in the mode of performing the operation. The knife recommended is a long straight catlin, double-edged at the point. It is intended to transfix the limb, and then to cut obliquely outward, forming two semi-circular flaps similar to those made by my operation.

The suggester of this improvement estimates very justly the importance of leaving the parts of the stump connected by their natural attachments, and thinks that by cutting in this manner, the patient suffers less pain.

I have not had an opportunity to put this mode of amputating to the test of experience on the living subject, but have repeatedly performed it on the dead. It may be performed with this kind of knife very neatly and speedily, and in most cases, I think it preferable to the other mode of cutting from without inwards. The stump will be the same in both cases, if the flaps are alike and of a proper length for the size of the limb; but I would advise that the limb should be marked by an exact measurement in the manner I have described above.

I have mentioned the use of the tourniquet, but it is more than ten years since I have used the common one. The instrument should indeed be condemned as worse than useless. The means I have employed to stop the hæmorrhage, are the handkerchief and stick, which are easily and quickly applied, not liable to slip or break, and are always effectual. Their application is simple, being nothing more than tying the handkerchief loosely round the limb, passing a piece of wood a few inches in length underneath it, which upon being turned, produces a powerful and quick compression.

Mr. Symes has made what he considers as an improvement in the method of restraining hæmorrhage; which consists in making direct pressure on the artery alone, and thus diminishing the quantity of blood in the limb. When the artery is effectually compressed a few minutes before the operation is commenced, it must certainly have that effect.

An objection against the common form of the tourniquet acting with a screw, is that it operates so slowly, as to retard the blood in the veins some time before the circulation in the artery is stopped; consequently the limb contains more than its due quantity of blood when it is amputated.

This objection does not lay so much against the handkerchief and stick, which operates much quicker, and if the precaution is taken to elevate the limb above the body a little while before the handkerchief is fitted, and the stick be turned suddenly, this objection may be obviated; or if it was important that a small quantity of blood only, should be lost, the artery might be compressed a little before the handkerchief is straightened, and the operator would have a complete command of the hæmorrhage. This I think the preferable method; for if I have been correctly informed, the want of this precaution, and an entire dependence upon compressing the artery, has in one instance in this country, been attended with bad consequences, which would have been prevented by the method I have suggested.

It is certain that a pressure on an artery, which will present its pulsations in the limb below, will not always prevent the artery from bleeding when divided. In amputating an arm at the shoulder joint, pressure was made where the artery passes over the first rib; which stopped the pulse at the wrist. When the artery was divided, it projected a full

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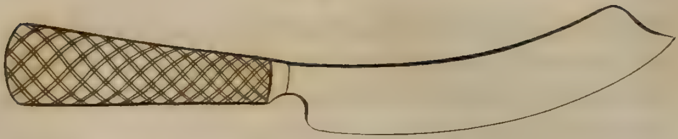

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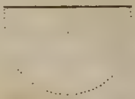

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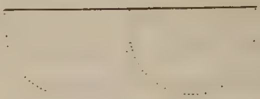

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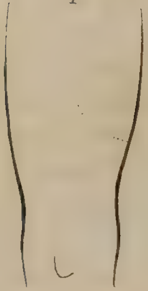

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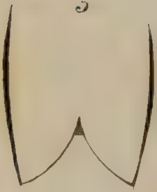

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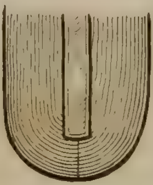

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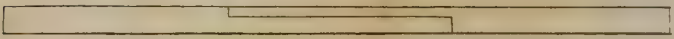

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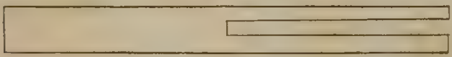

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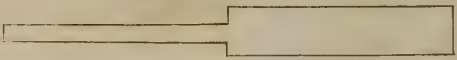

J. B. del.

stream of blood. The end of the artery was grasped with the fingers, however, and tied so that no bad consequences ensued.

Upon the whole, I am decidedly of opinion that the method I have proposed is the safest and best.

Explanation of the Plate.

1. Amputating knife with the edge on the convex side, the blade about five inches long, and one inch wide.
2. Piece of paper long enough to encircle the limb, but folded up so as to be but half its circumference, and cut out by the dotted line marked by a pair of compasses.
3. Same piece of paper spread out.
4. Limb to be amputated ; the dotted lines representing the marks made with the pen or crayon, guided by the two semicircular edges of the paper.
5. Appearance of the stump before the dressings are applied.
6. Imaginary section of the stump after it is healed.
7. Strip of adhesive plaster doubled and marked where it should be cut.

8 and 9. The same cut and spread out.

ART. V. CASES *of* SPINA BIFIDA. By ANSEL W. IVES, M. D. of New-York.

CASE I.

ON the 1st of July, 1815, I was called to visit Delia Tuttle, aged five months. Her disease was spina bifida. Both the parents and the child showed an apparent predisposition to scrofula ; and the father had been previously afflicted with various forms of that disease. I was informed that at her birth there was a soft hemispherical tumour upon the loins of the child, an inch and a half in circumference ; that for some weeks subsequent to that time, it could by pressure be made to recede entirely ; and that sometimes it had disappeared spontaneously ; that when the sac was thus emptied, the rough edges of the aperture in the spine, which was of the size of a half crown, had been distinctly felt. No effect on the brain had ever been observed from pressure on the tumour.

The patient was active and playful, and her health had been uniformly good, with the exception of involuntary evacuations of fæces and urine, which she had had from birth.

The tumour was situated at the junction of the dorsal and lumbar vertebræ ; it was tense, elastic, and semi-transparent, resembling very much a distended urinary bladder. Its circumference, at its base, was twelve and a half inches, and from the opposite parts of its base over its top, it measured eight inches.

Notwithstanding the discouraging testimony of Mr. A. Cooper, relative to cases of spina bifida with paralysis, still as his mode of practice, by puncturing and pressure, was the only one which offered a hope, in this case, it was determined to adopt it. In the course of the same day, the tumour was punctured with a common couching needle, and about an ounce of fluid as transparent as water was evacuated. A compress was applied over the sac, and made moderately tight by a roller. No sensible effect was produced. On the 2d and 3d days she appeared as well as before the operation.

July 4th. An ounce and a half of fluid evacuated, and dressings applied as before.

On the 5th and 6th she had symptoms of pain and gripings in the bowels ; otherwise no effect obvious from the operation.

7th. 10 o'clock A. M. I made an opening near the top of the tumour with an acute lancet, prepared for that purpose ; for it had been found impracticable, on account of the distension of the sac, to procure any considerable discharge from an opening by a couching needle. Three ounces of fluid were now discharged in about two minutes. The opening was covered with adhesive strips, and firm pressure reapplied to the sac. 4 o'clock P. M., the mother observing the child unusually stupid and sleepy, examined the dressings, which she found loose, and the tumour hardly perceptible.

Her countenance was pale; extremities cold; pulse feeble and quick; and she was completely comatose. I observed a deep depression of the fontenelle; and the scalp, at that part, was so completely destitute of support underneath, that I now concluded that the water in the tumour communicated with the brain. The tumour had principally subsided, and the sac lay flaccid on the fluid which remained. The opening was closed by adhesive strips, and covered with compress and bandage. The moment pressure was made upon the sac, and the fluid pressed into the spinal canal, the depression at the fontenelle was raised, her breathing, which had been stertorous, became natural; she was resuscitated, and became, almost instantaneously, active and playful. The quantity of water discharged at this time, could not be accurately determined, but it was thought to have been at least ten ounces. It is proper here to remark, that from early infancy the patient had been accustomed to the use of laudanum, and for some weeks previous to the time, when I first saw her, had taken twenty-five drops at a dose. Twenty-five drops had been given at 12 o'clock this day, and she was directed to take twenty drops at 9 o'clock the same evening. During the afternoon and night, she was apparently as well as before the last evacuation.

8th. The tumour was so rapidly distending, that it became necessary to relax the bandage; continued well during the day; at night took laudanum, notwithstanding which, she was restless, often screaming suddenly, and starting in her sleep.

9th. 7 A. M. Her skin was hot and dry, tongue white, bowels constipated, pulse quick and hard, and she refused the brea On removing the dressings, it appeared that the opening made at the last operation, had not healed. Let off two ounces of fluid, of a straw colour, and re-applied the bandage with moderate tightness: prescribed calcined magnesia and calomel, each five grains. At 6 P. M. the medicine had produced two or three evacuations from the bowels. The violence of all her symptoms in the morning was increased; the head thrown back, the eyes rolled upward, with pupils dilated; in short, she had all the symptoms of acute hydrocephalus.

10th. 9 A. M. She was so fretful the preceding evening, that the mother had given her twenty drops of laudanum, which quieted her the remainder of the night. She had had frequent evacuations of a green liquid matter from the bowels. Her head was still thrown back, and she was writhing and moaning with pain, though the violence of her febrile symptoms was in some degree abated. A third part of the surface of the tumour was inflamed; it was covered with compresses, wet with lead-water, and the roller loosely re-applied: she was directed to take, at short intervals, the chalk mixture. 6 o'clock P. M. She had been quiet during the day, and, when still, apparently free from pain. Pupils, however, much dilated; perspired constantly about the head and neck; extremities deadly cold; evacuations from the bowels more natural; appetite voracious, but the stomach immediately ejected every thing taken. She was directed her usual dose of laudanum in the evening.

11th. 9 A. M. Last night slept quietly; extremities still cold and trembling; head warm, and sweating profusely; the eyes more natural than the day before; appeared to be in pain, when moved, and was most easy with her head reclining back upon the neck. The tumour measured twelve and a half inches in circumference, and from base to base across the top seven and a half inches. 11 A. M. Same day, was again called in great haste. Was informed by Mrs. T. that the patient had lain quietly in the cradle, after the dressing in the morning, until a few minutes before she sent for me, when, perceiving the pillow and clothes to be extensively wet, she was led to examine the tumour, which, to her surprise, had all disappeared. I found the child lying in the mother's lap, and moaning as if in distress. The depression of the scalp at the fontenelle, confirmed the supposition that the sac was again emptied. She had no symptoms of coma, but her countenance was pale: her head and neck sweating copiously; and her extremities cold. On removing the dressings, the sac was found completely emptied, and lying collapsed on a level with the surface of the body; it was considerably inflamed on one side, and gave pain when touched. The water had been discharged at the opening made at the last operation. The opening had been prevented from healing, by the rapid distension of the sac, and the continued dripping of water from the orifice. The edges of the opening were scarified and brought closely together, and the sac covered with a compress wet with a solution of the superacetate of lead. 6 P. M. Pulse feeble and quick; perspiration profuse from the head and neck; and extremities cold.

12th. A. M. Slept well the last night; the tumour measured five and a half inches from base to base over the top, and the inflammation of the sac continued without apparent alteration. In the morning, the febrile symptoms the same as on the preceding evening, but in the course of the day became more alarming; the whole surface of the body cold; the perspiration from the head constant and copious; head drawn back and rolled from side to side; eyes opened wide; pupils much dilated, and the whole countenance expressive of the most extreme anguish; the patient constantly moaning, though too much exhausted to cry, and frequently seizing the breast voraciously, but immediately turning from it, as if satiated.

13th. 10 A. M. Had slept half the night; pain apparently abated; warmth of the body partially restored; eyes appeared more natural; and her symptoms generally more favourable. The tumour measured the same as before the first operation.

14th. General health fast improving; perspiration from the head abated; heat of the body restored to a natural temperature, and her evacuations natural.

16th. With the exception of general debility, the patient was as well as before the operation.

22d. Her general health was completely restored, but she showed signs of pain when carelessly moved, or when pressure was made upon the tumour, which in size and appearance, was the same, except some increased thickness of the sac, as when it was first punctured.

24th. The adhesive strips were taken off, and the dressings discontinued.

Nothing more was done until the 16th of October, when I again visited the patient. I found the tumour remarkably tense, and measuring thirteen inches in circumference; the sac, also, had become considerably corrugated and thick. It should be recollected that the tumour, from the birth of the child, until the time of the first operation, i. e. five months, had increased in circumference *eleven inches;* whereas, from the 24th of July to 16th of October, nearly three months, it had increased only about *half an inch;* so that the treatment had nearly suspended its growth. I now wished to try the effect of drawing the water entirely from the brain, and I determined to evacuate the fluid, in large quantities and at short intervals, and omit the compression of the sac. Upon making a puncture, however, with a couching needle, the distension was so great, that no fluid could escape, and at the recommendation of my friend Dr. J. M. Smith, I procured a trochar, about the diameter of a common sized knitting-needle, which proved to be perfectly adapted to the operation.

Oct. 20th. 9 A. M. I drew off, with the trochar, five ounces of fluid, as limpid as the purest water, and closed the orifice with adhesive strips. After this evacuation, the pulse, for the first time, became irregular; it beat 100 in a minute immediately after the operation, and, in the mean time, intermitted four or five strokes. At twelve o'clock at noon, the sac was apparently as tense as before the puncture.

23d. Drew off eight ounces of transparent fluid. Towards the close of the operation, the patient appeared, for a short time, to be in great pain; and soon after became pale and languid, as if exhausted by copious bleeding; her pulse was feeble; she had a constant wavering of the head, and a tremulous motion of the limbs.

24th. The countenance was pale; the pulse feeble, and all the symptoms indicated debility from the previous depletion. From this time the trial was again suspended; she soon regained her usual strength and activity, and, when a year old, could walk with facility.

On the 11th of march, the tumour was again measured, and found to be thirteen and a half inches in circumference. As the growth of the tumour had only kept pace with the growth of the child, I was strongly induced to make a second effort to empty the fluid and corrugate the sac, so as to contract it closely over the aperture in the spine. Could this be accomplished, it was thought, that, although the disease might not be effectually cured, yet the deformity would be removed, and the life of the child be relieved from the hazard to which it would be otherwise exposed by any accidental bursting of the sac.

Accordingly, a double-headed roller was prepared, with a cap in the middle, adapted to the size and shape of the tumour, so as to produce an equable pressure on the whole surface of the sac. This cap was applied over the tumour, and the bandage passed round the body of the child, so as to cross on the belly. The tumour was then punctured, while the bandage was drawn moderately tight by assistants. Three ounces of fluid were discharged, and the roller so applied as to prevent the possibility of its relaxing.

13th. The patient walked about the room without apparent inconvenience, and appeared to suffer very little from the operation. The dressings and sac were kept constantly wet with a decoction of nut-galls.

14th. Four ounces of fluid were drawn off; the tumour appeared to be contracting; firm pressure was continued.

15th. General health unimpaired; considerable local irritation produced by the bandage; the sac still kept wet with the astringent wash.

16th. Five ounces of fluid evacuated.

17th. Was fretful and restless; notwithstanding the utmost precaution, excoriations were produced on the belly by the bandage; the sac very much corrugated, and apparently diminished in size.

18th. Drew off six ounces of fluid, which was high coloured; she was yet able to walk the room.

20th. Strength obviously diminished by the last operation; evacuated six ounces of fluid.

21st. The excoriations produced by the pressure of the bandage were so extensive, the system was so much enfeebled by the evacuations, and the consequent general irritation so great, that the expectation of contracting the sac became hopeless, and the case was abandoned. The patient soon regained her usual health, and the sac its former size. The involuntary discharge of urine caused a troublesome irritation; otherwise, she has, to the present day, enjoyed more uninterrupted good health than is common to children of her age. She is uncommonly sprightly and intelligent, and has, indeed, from infancy, manifested much precocity of mind. The tumour is exceedingly tense, and now in the tenth year of her age, it is but sixteen and a half inches in circumference.

The following case, which was subjected to a mode of treatment similar to the foregoing, was furnished me by my friend Dr. J. Wood.

CASE II.

William, son of Mr. Orr, aged 9 years, full habit of body, countenance fallen, light-coloured hair and eyes, head large, fontenelles closed, pulse languid; he has partial paralysis of his right leg, and also of the bladder and bowels; he is sensible of the disposition to evacuate the bowels and bladder, but cannot retain their contents until a convenience can be obtained; thus he is constantly wet and filthy from the dribbling of urine, and discharge of fæces. This constant application of urine to his limb, added to the frequent falls, from the palsied limb giving way, induces sores on different parts of his leg and thigh.

This boy has had a tumour from his birth, situated about the junction of the sacrum with the lumbar vertebræ, and a little to the right of the spine. It has fluctuation which is very evident to the touch. When the finger is pressed in near the upper edge of the tumour, it is received into a cavity or hole, the boundary of which has a bony feel. Pressure upon the tumour produced but little alteration in the size of it. The symptoms attending this case left no doubt of the nature of the disease, and notwithstanding we are told, that when it is attended with paralysis there is no hope, yet the very uncomfortable state of this patient, as it related both to himself and friends, was a sufficient reason for endeavouring to afford him some relief—either by the means that have already been used in similar cases, or any other which the judgment of the physician might suggest. The means, however, that were employed in this case, tend only to confirm the opinion, that such cases are hopeless. It was intended to have tried the effect of a seton, passed through the tumour. But the child moving to the country with his parents, prevented it. The thickness of the coverings of the sac, together with the little effect produced by tapping it, induced a belief that a seton might be introduced, without danger to the life of the child. On the 30th September, 1817, the tumour was punctured with a couching needle. The smallness of the opening added to the oblique direction of it, and the thick integuments of the tumour prevented the ready flow of the fluid. A small quantity only of limpid fluid was obtained. On the 4th of October, it was evacuated by means of a small trocar, (made under the direction of Dr. Ives, and used by him in a similar case.) The quantity discharged at this time was about ℥iss. On the 6th, 8th, 10th, and 11th of October, it was punctured, and ℥ij of fluid at each time drawn off; 13th ʒvj. were discharged. The water had got into the cellular substance, and continued to ooze through the wound after the removal of the canula. 14th. Patient looks paler than usual; tumour larger in consequence of the fluid getting between the sac and skin; drew off ʒiss. Patient complained greatly of his head, and became very pale; pulse languid but regular. Some times after the operation, the pulse became irregular. 15th and 16th. The trocar was introduced, but no fluid passed through the canula. It oozed through the wound as before, after withdrawing the instrument. 20th. Tumour much flatter; skin thickened where the punctures have been made. 28th and 29th. Full ℥ij. of fluid were drawn off at each time. At these last two visits, pressure being made on a particular spot at the upper part of the tumour, the child suddenly screamed out with pain, at the same time placing his hand upon his abdomen; a gurgling noise was produced by the pressure. The child now removing into the country with its parents, I was prevented from prosecuting the treatment any further.

From the facts stated in this case, it will readily be conceded, that although they do not prove the utility of the practice of letting out the fluid, they certainly show that much more energetic measures may be made use of in spina bifida, than have generally been admitted.

ART. VI. *An* ACCOUNT *of an* EPIDEMIC ERYSIPELATOUS FEVER *prevailing in Westchester and Putnam Counties, in the State of New-York.* By JAMES FOUNTAIN, M. D. Fellow of the College of Physicians and Surgeons of the University of the State of New-York.

THE character and constitution of epidemics vary so essentially, and present so many anomalies at different periods, that the most wary are often betrayed into errors fatal to their patients, and painful to their own feelings. Thus, at the irruption of an epidemic, the aged practitioner possesses but limited advantages over the mere initiate. His experience avails him little, and his theory less; for his preconceived notions are often drawn from the dogmas of the schools, frequently the fruitful source of prejudice and blind obstinacy. The regular systems of study, instead of relieving, serve only to perplex his judgment, and misguide his hand. Under such difficulties we are naturally led to turn to the journals from whose pages we can reap the fruits of the labours of those who have gone before us. We there see facts faithfully recorded, and deduce therefrom inferences which serve as beacons to direct our cautious steps. Hence the necessity of treasuring up the history of epidemics and the mode of treatment found most successful. Armed with a knowledge of these facts, the physician is enabled to proceed with a degree of decision, otherwise unattainable; except through the medium of that self-sufficiency which proceeds from the hardihood of ignorance or obtuse sensibility. Experimentally acquainted with these trying difficulties, I am induced to contribute my humble mite to the stock of medical history.

That section of the country visited by the epidemic I am about to describe, is comparatively small, comprising a space of about twenty miles only in diameter, and forming the lower part of Putnam and upper part of Weschester counties. Its central part is sixty or seventy miles north of New-York, and fifteen or twenty miles east of West Point on the Hudson. The aspect of the country is agreeably diversified by hills and valleys. The hills are mostly gently sloping, and generally cultivated to their summits. In the western part of this district, bordering on the highlands, however, they are more precipitous, and the intervening land more broken. They appear to be made up of enormous masses of granite thrown up from the foundations of the earth by Hutton's fires, or some other violent power beneath. These are interspersed or loaded with ponderous coverings of marl, over which is a clayey or silicious subsoil; and this is overspread with a tolerably thick soil of calcareous, silicious, and vegetable matter. Occasional beds of primitive coarse limestone appear, with some inferior ones of lead, iron, carburet of iron or plumbago, sulphurous combinations, and probably some gypsum or plaster of paris.

Within the space mentioned are no less than eight lakes, varying in size from one to six miles in circumference. Amongst these, the beautiful Mahopac holds the pre-eminence. It is about six miles in circumference; its water is transparent and sweet, and is, probably, destined ere long to contribute to the refreshment and salubrity of the emporium of America; [New-York.] These lakes have scarcely any marshes, neither are there any of any considerable extent to be found in this whole tract of country. The water is generally good, though some wells and a few springs are impregnated with sulphate of lime.

The inhabitants are, with few exceptions, a set of industrious and healthy farmers, and their houses are mostly kept clean and comfortable. Cider is their common beverage, than which none is better calculated to facilitate the digestion of animal food, on which the class of labouring people mostly live. The quantity of foreign spirituous liquors consumed is less than at former periods, and is daily diminishing.

The epidemic commenced about the first of February, 1825, and continued, in scattering cases, even as late as the first of August. The number of cases that occurred was not less than two hundred and fifty, and that of the deaths about thirty. Compared to many former epidemics, it appears indeed insignificant, yet it was attended with peculiarities not altogether uninteresting.

The weather either preceding or during this epidemic was not remarkable for any peculiarity. The autumn previous was uniformly pleasant and healthy. The winter was open and mild, with no greater vicissitudes than are usually experienced at this season. The spring opened early, and vegetation was very rapid. At the commencement of the winter, horses were universally affected with the slavers, so much so, that the subject of its cause became a common topic of conversation amongst the people. It was generally imputed to the fresh growth of under-grass immediately preceding the hay harvest. This was followed by a severe and universal epidemic (if the phrase be allowable,) amongst them, proving fatal to several, and a great annoyance to all.

As these appearances were observed to precede an epidemic by Ricketson,* I am inclined to believe they were the primary effects of causes more fully developed afterwards, and rendered peculiarly incident to man, as was said of the plague,

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* Medical Repository, Vol. XII. p. 22.

> "On cats and dogs the infection first began,
> At length the fatal poison fixed on man."

About the same time the influenza became epidemic and general, not over this part of the country only, but throughout the State. It was attended with its usual characteristics, especially a most harassing cough. The type was moderately inflammatory; the lancet was seldom required, but mild emetics, laxatives, sudorifics, and expectorants usually put a period to the disease in a few days. About the latter part of January the influenza began to change its character. The cough diminished, and finally ceased to be a concomitant symptom, and was heard of no more; the throat became affected in a peculiar manner, and erysipelatous patches, as mentioned by Dr. Good,* appeared on different parts of the body. I must beg leave to observe, that ever since the prevalence of the epidemic winter fever of 1813, which was here unusually rife, occasional cases of that disease have occurred. This also appeared, and was very malignant in several persons.

February had now arrived, and the epidemic assumed the characteristics which it steadfastly maintained to its termination. Its invasion was sometimes without any premonitory symptoms, but it was commonly preceded a day or two with stiffness and soreness about the fauces, referred to the root of the tongue on each side of the larynx. On inquiry for the seat of uneasiness, the subjects uniformly placed the thumb and fore-finger of the same hand, one on either side of the upper part of the trachea, for both sides were generally equally affected, though not invariably. Those who had been subject to the quinsy, often mistook it for that affection, but more commonly, however, it was supposed to be ordinary cold with relaxation of the palate, or "the palate down," as it is termed. There was very little swelling externally, or even internally, at any period of the disease. On inspecting the fauces at this time, a slight blush of redness was observable, of a venous or darkish hue extending across the margin of the curtain of the palate; the tonsils were very little swelled; the *velum pendulum palati* seemed every way relaxed, hanging lower than usual, and the uvula a little elongated. These appearances were at this time very slight; but unexpectedly the subject was seized with a chill, which sometimes amounted to a rigor, and with universal soreness and pain in the head, back, and extremities, which were often very severe. The pulse, at this period, was quick, small, and feeble. Soon, however, re-action ensued. The pulse now rose and became rapid and full, yet invariably soft and unresisting or gaseous, and the pains continued to increase to such a degree, as to have been mistaken for rheumatism, a fatal error, which occurred even to a medical man of considerable acquirements and experience. On inspecting the mouth, at this period, the tongue was observed to be covered with a thin dirty whitish scurf, moist, and sometimes yellow from the commencement. The whole fauces now grew red, dry, and peculiarly glistening, as if varnished. The redness was darkest over the larynx, pharynx, and whole fauces, and particularly across the edge of the curtain of the palate: from this dark arch the redness was growing fainter until it was lost in the roof of the mouth. The velum pendulum palati continuing to descend, the uvula finally rested on the root of the tongue, and was reflected up like a hook. As the disease advanced, it became stiff and permanently retained that figure until the inflammation abated; it then sometimes returned to its original shape, but more frequently the inverted apex sloughed off. Meanwhile the irritation continuing to increase, the urine became high-coloured, the skin dry and hot, and the general distress almost insupportable. The intestines were uniformly torpid throughout the disease. There were slight remissions in the morning, but the evening exacerbations were severe. In a few instances, spasms of the larynx ensued, and the subjects were threatened with immediate suffocation for two or three days. Except in such cases there was not much difficulty either in respiration or deglutition. Neither was there cough in any stage of the complaint. As the disease progressed, the tongue became dry, yellow, brown, or black; and a number of small abscesses opened about the larynx, pharynx, and their vicinity; and the tonsils suppurated. These abscesses discharged little at first, but in a few days the whole fauces presented the appearance of a large concave irregular fungous ulcer secreting and pouring out an enormous quantity of pus, especially in old people. In mild cases, the disease terminated here; the ulcers healed, the skin became moist, and every symptom gradually disappeared. But in malignant cases, the fauces gangrened before ulceration, beginning at the margin of the palate, and death closed the scene on the third or fourth day. In old people death was sometimes induced by the excessive discharge of pus from the abscesses. Neither of these terminations however was frequent; but more commonly about the 5th, 6th, or 7th day the patient was observed to breathe with difficulty through the nose; and on its upper part across the ossa nasi a red patch was discovered glistening and smooth, slight at first, but a sure omen of portentous import. Like a cloud gathering gradually for a storm, it darkened and spread from every point until the whole face was lost in redness and tumefaction; the eyes were closed, the nose appeared to sink, the mouth was distorted, and the ears stood aloof, projecting and stiff, and from them and the nostrils a thin acrid fluid was continually oozing. The disease continuing, the redness deepened, verging to a purple, and blisters from the size of a sixpence, and smaller, to that of a dollar, appeared sometimes solitary, but more frequently in clusters. These were filled with a yellow serum, and the skin, or rete mucosum beneath them, was often purple, and even black, giving the whole visage an unnatural and terrific aspect. This appearance spread from the edges, while the part first assailed rather improved in appearance, or even desquamated. It seldom descended to the trunk of the body, though in one instance I saw it spread over the breast and shoulders. Immediately on the appearance of the erysipelas on the face, the throat affection began to abate, and ceased entirely when the face became much affected. The general irritation, during this state of things, remained the same; slight morning remissions and evening exacerbations with restlessness, and sometimes delirium, heat, thirst, foul tongue, dry skin, &c., marked its progress. After four, five, or six days, the spreading ceased, desquamation ensued, the eyes re-opened, and the skin became smooth, retaining its redness, however, several days. This may be called the full course of the erysipelatous epidemic fever in a good habit when not interrupted nor diverted by interference. Convalescence was generally very rapid after such cases when properly managed.

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* Study of Medicine, Vol. II. p. 293.

I shall now notice some of the anomalous cases, or, as I usually term them, fortuitous locations, or misplacements of the disease.

Sometimes the fauces became suddenly relieved, and a most violent indescribable distress was felt in the stomach, intestines, or bladder. The lungs appear to have been exempt from the disease, so far as I have either seen or heard; in no case was there any cough more than what arose from the irritation of the matter about the fauces. I have known the stomach, intestines, bladder, and throat alternately the seat of the disease several days in rapid succession. When the bladder was affected, strangury, and frequently suppression of urine ensued. One case of affection of the bladder proved fatal the third day after its commencement. The symptoms of the affection of the stomach and intestines were similar, differing only in the seat of distress, except that when the stomach was affected, the prostration of the powers of life was much greater; and in one case, that of a delicate female, death from this cause speedily ensued. In both affections the pulse was quick, small, and soft, the countenance sunken, and the thirst insatiable, much beyond what I have ever known in the most severe gastritis or enteritis. I have seen several such cases where gangrene and death ensued in a few days, yet the tongue was scarcely scurfed to the very termination.

These metastases to the abdomen were apt to take place on the third or fourth day of the attack. Often about this time, while flattering ourselves with the prospect of a favourable issue, a rigor suddenly announced the new attack, and death sometimes followed at a rapid pace. These abdominal affections were not always the effect of metastases from other parts, but were often primary affections. This may be thought, however, to require evidence. As to autopsic examinations in this part of the country, they are held as a gross sacrilege, and are therefore out of the question. The only evidence I can give then, is, that of the symptoms and termination, which were precisely those which followed the attack of the abdominal affection after that of the throat and other parts had suddenly disappeared. This I have repeatedly witnessed to my most poignant sorrow.

This disease is probably as deserving the appellation "hydra" as any other; yet this, as well as most diseases to which it has been applied, has seldom more than one head at a time, removing or placing it at pleasure on which part of the body soever it pleases. I have yet noticed but a small part of the anomalous forms of this disease. Two parts were often attacked simultaneously, yet they never, I believe, progressed together, for as one advanced, the other declined and disappeared. I have seen almost every part of each extremity attacked at different times. I have repeatedly seen the thigh, the leg, the arm, the fore-arm, the hand, or the finger, or toe, the rallying point, and terminate in resolution or gangrene, and sometimes in suppuration, which in large limbs formed deep and extensive abscesses. I had one patient, a girl eleven years old, in whom the vulva was the seat of the erysipelatous affection; it spread anteriorly up to her navel, and posteriorly from her shoulders to the midway of her thighs. She blistered, desquamated, and recovered.

At the accession of these irregular cases, the erysipelatous patch engrossing all the patient's thoughts, he paid little or no attention to his throat; yet on examination, I found the fauces invariably to wear that peculiar glistening purplish tinge, with a red halo along the margin of the velum pendulum palati. These appearances vanished as the erysipelatous patch enlarged.

These patches or efflorescences, which were never more than two, seldom more than one, always blistered and spread to various sizes according to the violence of the disease, the constitution, age, temperament, &c. of the subject in whom they occurred. In old people, and those of a choleric temperament, the throat affection was most usual and severe, and was prone to suppuration and gangrene. The young and those of the sanguineous temperament, were oftener affected about the extremities, and in them suppuration was often induced.

Another form of the disease is that of the affection of the glands; and those most frequently attacked were the axillary and cervical, though I have known the inguinal several times to inflame and swell, but never to suppurate. The axillary and cervical almost invariably, suppurated. They discharged but little at first, but like all other abscesses incident to this epidemic, they secreted an unusual quantity after the first twenty-four hours of their discharge. These tumours were not prominent, and never pointed, but were so diffuse, and the integuments so thickened, as to render it very doubtful whether they should be punctured or not. I opened many very hesitatingly, yet the event proved the decision very satisfactory. The copious discharge, in some way or other, afforded striking relief, and rendered convalescence very rapid. A young man was seized with the epidemic; the fauces and one cervical gland were simultaneously affected. The throat affection subsided, and the gland continued to enlarge ten or twelve days. Having reached its acme, it remained *in statu quo* with very little evidence of suppuration. I punctured it, however, but was very much mortified for having cut through such a depth, and procured so small a quantity of matter; but the discharge continued to increase daily, and afforded him most evident relief. He had been comatose from the attack, and for some years has been heavy and considerably deaf. These soon vanished, and to use his own phraseology, he felt quicker and smarter than he had done for several years. When these glandular affections resolved, an erysipelatous halo frequently spread from them a considerable distance around; they then blistered, desquamated, and terminated favourably.

CAUSES.

Predisposing.—The predisposing causes of this disease, as far as I was able to determine, were cold, fatigue, watching, fasting or irregular meals, and anxiety of mind; in short, whatever debilitated, or in any way deranged the healthy order of the various functions. The phenomena of life, according to Richerand, is a constant struggle between the powers of vitality, and those causes which tend constantly to destroy the body. It must therefore be evident, that whatever disturbs the healthy order of actions, enfeebles the powers of vitality, and must, by giving morbific agents the ascendency, induce predisposition. General imbecility of healthy action not only opposes less resistance to the action of deleterious agents, but renders the whole system more susceptible to impressions of all kinds; hence irregularities and debilitating means call forth diseases, or rather allow them to be developed, even in those in whom the seeds of the disease were dormant, and would otherwise have remained so. This was strikingly exemplified in the late epidemic. Nothing was more common than to hear people complaining of slight sore throats. In fact I could scarcely look into a person's throat that did not bear evident marks of the affection; yet they frequently amounted to nothing more. The healthy robust yeoman, with his vigorous vitality and obtuse sensibility, withstood the morbific principle or tendency unmolested, until the susceptibility to the disease was worn out; for it is a law of the animal economy, that the susceptibility to impressions of all agents not capable of destroying life, diminishes by the continuance of their application; and to this law, far more than to the science of medicine, we are indebted for the majority of our splendid cures of fevers.

Age.—At the irruption of the epidemic the aged appeared to be the favourite subjects of its attack, and in them it seemed to display its greatest energy. Few only recovered who had passed their 60th year; many died between that age and 45. There were no deaths under 30, that were not owing more to neglect or mismanagement, than to the malignancy of the disorder. Towards its termination it affected younger subjects, mildly however, and none, I believe, were affected under the 12th year of age. Sex did not appear to have any effect in predisposition, yet more women died than men.

Temperament.—Persons of the choleric temperament were more predisposed than those of other temperaments, though the sanguineous were often affected. The temperaments had more influence in shaping the character of the disease than in predisposing to its action.

EXCITING CAUSES.

The exciting causes, or those which gave origin to this epidemic, are purely problematical. My esteemed friend, Dr. Joseph M. Smith, of New-York, in his ingenious treatise on the philosophy of epidemics, has endeavoured to systematize their exciting causes. But in which of his classes this epidemic is to be assigned a place, I must leave to Dr. Smith to determine. In the meantime I must beg to observe that I cannot locate it in his 1st class, "*Contagious epidemics,*" though the majority of the people, and some few medical men, believed it to be catching, or contagious. The former entertained that opinion because they could not, and the latter because they would not, be at the trouble to think and judge for themselves. When we see a disease spreading over a country affecting whole families, attendants and all, the idea that it is contagious springs up so spontaneously and readily, and requires so little reflection, that it is not surprising it should be adopted by the mass of mankind ; but from physicians we should expect better things than such hasty and unphilosophical conclusions. This epidemic originated amongst us. I saw the first, and as yet the last cases, and can bear testimony to their identity. One third of the subjects, and many of the victims of the epidemic, had not been near the sick. Simultaneous cases occurred miles apart, nor had they visited the sick, or been visited by those who had been amongst them. Several were so scrupulously exact, as not only to shun the sick, but to prohibit every person from entering the house who had been in attendance ; yet those very persons sickened and died of the epidemic. And further, those who contracted the disease and sickened out of the district, did not communicate it to others. The circumstance of its affecting progressively the several members of a family, is easily and satisfactorily explained on the ground of predisposition. As soon as one of the family sickened, the whole became alarmed. The fatigue, the anxiety, the alarm, the watching, irregular diet, exposure to night air, wet and cold, so deranged the healthy order of the functions, that the disease, to the seeds of which all were equally exposed, was immediately developed. It is in this unfair way diseases take the advantage of our unprotected states of the system. We then surrender for want of order and energy to oppose.

Neither can I assign it a place in Dr. Smith's 2nd class, "*Infectious epidemics.*" It commenced in February, when all miasmatic exhalations were either locked up, or their generation suspended by frost. Neither could the disease have been the effect of miasms received anterior to frost, for visitors from the adjacent country were often the subjects of its action.

To his remaining class, "*Meteoracious epidemics,*" then we must refer ours, and to his 2d genus "*Insensible.*" To this also I must urge one objection. I cannot conceive how it happens that the atmosphere, which is continually driven over this section of the country by the storms of a tempestuous season, should shed all its venom on this little devoted spot. During the whole time this epidemic raged, not a foot of air exterior to the houses, occupied the same spot a minute. It was constantly arriving from the north, the south, the east or the west, in rapid succession, and yet dropping its virus no where else, or working morbid changes on this people only, yet invigorating their neighbours, or passing harmlessly over their heads.

PATHOLOGY.

After having been so conversant with the disease, it will be expected that I should have been governed by some pathological principles. At the invasion of the epidemic a great diversity of opinion prevailed as to the nature of the disease. Some strenuously maintained that it was true cynanche maligna, others conceived it to be the influenza, while a third held it to be neither. But the universal absence of those ash-coloured spots, aphthæ or mucous sloughs, and coryza, and the appearance of others not attendant on cynanche maligna, induced the advocates for its being the putrid sore-throat to renounce their opinion. Neither was there any cough or pulmonary affection attendant during the whole epidemic, except in some phthisical subjects, and these were not confirmed by the complaint, but generally mitigated.

The disease, after a little sorrowful experience, was universally allowed to be of that class called asthenic. To the term "*asthenic*," as well as its kindred passive inflammation, I must beg to enter my protest as being a most decidedly injurious term. As for passive inflammation, it is a direct contradiction in words. Inflammation necessarily implies action, while "passive" implies suffering, not resisting, opposing, or acting. Chronic inflammation is another distant connection of the same family. Inflammation is the same, as far as the parts affected are concerned, whether active, passive, or chronic, differing only in degree or intensity of action; therefore, the *therapeia* necessarily growing out of these terms, must lead to fatal consequences in practice. The same, I admit, cannot be said of the term "*asthenic*," yet it is certainly very objectionable. It signifies literally a want of strength, which indeed is the case in the majority of diseases usually assigned to this class. There is a want of muscular and functional power, yet if this want of power is used synonymously, or confounded with want of action, as it frequently is, an erroneous idea is conveyed, for arterial action is often very brisk, and in febrile exacerbations even strong, while general debility is very evident. Besides a want of strength necessarily suggests the use of tonics or stimulants. Sthenic diseases, say the Brunonians, are remediable by the abstraction, and asthenic diseases by the addition of stimuli. Corresponding to this, the Italians have their diathesis of stimulus, and their diathesis of contra-stimulus. The former, say they, are to be cured by suitable contra-stimulant, and the latter by stimulant means. In this light, viewed curatively, all fevers must be struck off at once from the class *asthenic*, or diseases of contra-stimulus, for no fever ever yet existed which was capable of being cured primarily by stimulants. Because we cannot deplete, it does not necessarily follow that we must stimulate; hence the mischievous tendency of the term *asthenia*. Tommasini, the Italian, aware of this, referred all fevers, and almost all diseases, to the sthenic or *stimulant class;* and Broussais did as much in considering all fevers the effect of gastro-enteritis, or some other local inflammation. Neither of these views of diseases, commonly called *asthenic*, however, is correct. The Brunonians would stimulate, and the Italians and French would deplete their patients *to death.* The truth is, fevers called *asthenic* cannot be cured either by stimulation or depletion. Hence the necessity of another class, and such an one is called the *diathesis* of irritation. To this class belong all miasmatic fevers, as I shall show on a future occasion, and from therapeutical views, I must beg to locate our epidemic in this class. It consisted both locally and generally of an irritative action, determined by the susceptibility of impression or predisposition; and this, as before stated, in a deranged or enfeebled state of the functions generally; and as vitality depends on a healthy and regular performance of these functions, the former must be debilitated when the latter are interrupted. The irritative is thereby enabled to preponderate and supplant the healthy action. In what this irritative action consists, I shall not attempt to determine. But it seemed to me to be intimately connected with venous congestion, in consequence of atony, or a loss of power or elasticity. As age advances, the veins become less irritable in a greater ratio than the arteries; hence they contain a larger proportion of blood which gives that purple hue to old people. Persons of the choleric temperament also have a preponderance of venous over arterial blood, therefore in them, as in old people, the disease was more severe. The number of subjects who recovered over sixty was only five, and these were all of strongly marked sanguineous temperaments. The younger the subjects, the more arterial action prevailed, and in them the disease was milder, approaching more to the inflammatory character. The countenance also favoured the idea of venous congestion, for it never had that florid hue which characterizes phlegmasial action, but wore a purple, and after a few days' continuance, a sunken and cadaverous aspect. The throat affection was evincive of the same state, being always purple or dusky in the centre, and redder towards the margin. When gangrene ensued, it always commenced at the centre, and spread every way. And lastly, the body of the tongue was indicative of the same state, being uniformly purple, more or less as the subject was older or younger, or the disease more or less malignant. This venous colour of the tongue and countenance, with other concomitants, has ever enabled me to distinguish *this* and the former *winter epidemic* from inflammatory diseases. When death ensued, the subjects had the appearance I should expect to see, had it been induced by suffocation, or a gradual deoxygenation of the atmosphere.

Why the veins should suffer a diminution of vital power, and permit a morbid distension more readily than the arteries, I am unable to determine. Why no two agents produce an exact identity of action or effect, is, confessedly, yet to be learned. They produce an effect concurring with healthy action, or departing from it with progressive deviation, until they arrive at the most incongruous. Some undeviatingly produce a local effect. Emetic and cathartic substances introduced into the veins of the arm produce their specific action on the stomach or bowels, and operate with as much certainty as if they were taken in at the mouth. Why then may not some morbific agents produce an elective effect on the veins in preference to the arteries, and on one part of the body in preference to another. The difference between the venous and the arterial blood, and their velocity of circulation, may enable the arteries to resist or modify the effect of some agents, which the veins are not able to do. Hence the equilibrium, both of blood and nervous power will be destroyed, and the more easily, as the system is debilitated, or the healthy order of its functions deranged; and this, as before stated, is the precise effect of all the predisposing causes of this epidemic. I am therefore induced to believe that *this destruction of the equilibrium of the circulating mass and vital power, constitutes the essence, or proximate cause of our erysipelatous fever.*

The local affection seemed to have no agency in the production of the disease, and when located on the external surface, it did not, in the least, influence its general character; being simply the effect of a general action by which it was kept up and wholly modified. But it did not always cease with the general action, unless that had been soon suppressed, for by its continuance an inflammatory affection was developed; for as Tommasini says, " every diathesic process, either severe or slight, which can succeed to irritation, will be of the phlogistic character." Hence it was that every case of long continuation was prone to terminate in suppuration. This was unquestionably the effect of the development of phlegmonous action, which at first did not exist. This inflammatory character was not developed in the affected part only, but throughout the whole system; and this, I shall subsequently show, proved a source of great embarrassment in practice. Internal, unlike external locations, materially influenced the character of the disease. This might have been expected from the nature of the parts concerned. They were, however, equally the effect of general action, both reciprocally modifying the character of the complaint. The continuation of these internal locations sometimes developed subacute actions and nervous phenomena the most singular and surprising I have ever witnessed. They were, *probably*, *inflammations* of the great sympathetic and other nerves of the abdomen or their tunics.

PREVENTION.

The principles of prophylactics are so easily and commonly understood, that I should have remained silent on this head, had not certain means been directed by medical men having a tendency not only to produce the disease, but the very worst consequences; I allude to the custom of drinking spirits. The practice of drinking ardent liquors, it cannot be denied, is of medical origin. It therefore becomes an imperious duty of every member of the faculty to discountenance an evil so pernicious, not only to the individual, but to society.

As a preventive of fevers, it cannot claim a character unless the person is under its constant influence. Dr. Rush observes, that habitual drunkards, who were all the time intoxicated, escaped the yellow fever: much better had they died sober victims to its fury. The excitement produced by a glass of brandy, is followed by a proportionate exhaustion. The subject is then in a state exactly fitted to be acted upon by disease. Hence it becomes necessary to be always either drunk or sober.

The only course to be pursued, as preventive, is to live soberly and regularly; to keep the stomach well replenished with wholesome food; to observe regular hours of sleep, and to maintain a perfect equanimity. Be calm, resigned, and fearless; for fear, grief, despondency, &c., powerfully derange the stomach, and enervate the whole system. Another great error also of medical origin is prevalent amongst the people.

I mean the use of debilitating medicines, emetics and cathartics. They powerfully debilitate and prove the means of predisposing to fever, as I have often witnessed. An intermittent will be brought back, and a dysentery induced during their prevalence by a smart cathartic. The bowels should be kept regular by diet, or the mildest laxatives, and well braced by wholesome food. It is time enough to take medicines when we are sick. But some physicians are so fond of displaying their wisdom, that they are eternally prescribing a dose to every one they meet; and many people are as fond of swallowing drugs, as they are of prescribing them. Hence some the practice is not surprising.

In this country all are more or less medical characters. They have read Buchan, now pompously styled, "Every Man his own Doctor;" Thomas's Domestic Medicine; or some other of equally mischievous tendency.

TREATMENT.

I have now arrived at the most important part of the subject, that part on which depend the life of the patient and character of the physician; at least, that on which a physician's character *should* depend. Yet how often does a subtle evasion, a smooth speech, or a few mysterious expressions delivered with a sanctified visage, even gain esteem and respect where disgrace and infamy should have been awarded.

This epidemic, like other diseases of a similar character, admitted of two plans of treatment. The one may be termed purely palliative, and the other curative and palliative. The first was adopted by those who aimed merely at assisting nature in conducting it to a safe issue. The latter was adopted by those who wished to take the work, as it is said, out of nature's hands. The palliative plan, as generally is the case, was pursued by the timorous part of the profession. Their object was "to assist nature in relieving herself." But they might with equal propriety say, "to prevent nature from destroying herself."

Palliative plan. This consisted in removing every source of concurring irritation, and permitting the disease to run its course; that is, to continue until the system became habituated to the morbid impression. The susceptibility being then exhausted, the irritative process subsided, and a healthy action spontaneously arose. Occasionally, however, some vital part was worn out before the susceptibility to morbid impression, and death closed the scene. They commenced by administering a mild cathartic, repeating it every second day. The interim was filled up by giving some mild diaphoretic, as spts. nit. dulc. in some warm vegetable infusion; or powders of ipecac. camph. opii, and sometimes, though with what propriety I cannot see, the nitras potass. The proportions were varied according to concomitant circumstances, generally, however, in doses so minute as to produce no sensible effect. These were accompanied with tepid pediluvia, and plentiful dilution. The fauces were gargled with some mild vegetable astringent; and the erysipelatous patches were washed with a solution of acetis plumbi either in water or cream, so weak in general however, as to do no injury in young subjects. As the disease declined, they endeavoured to support the patient's strength by bark, wine, &c. which sometimes promoted convalescence, but frequently assisted in developing and confirming an inflammatory diathesis, which in this debilitated and complicated state of the system was difficult to be removed. This palliative plan, in young subjects affected with the epidemic in a mild degree, answered very well.

This plan of treatment is very congenial to the feelings of people generally, as it consists only in combating symptoms, or fighting for the patient. It gives the attendant an air of doing "every thing that could be done" for his ease and comfort, and is therefore well calculated to gain popularity. It is a common, and generally, a just remark, that the poor recover sooner than the rich; the reason of which is, they are treated *sans ceremonie*, with something more effectual, as subsequent consequences are not so much to be feared.

Curative plan. On the other hand, it is contended that the action excited by morbific agents has as great a tendency in severe cases to destroy, almost as invariably, as to preserve life. The action produced by all morbific agents, is shaped by their quality more than their quantity, and modified by the degree of susceptibility of impression ; and this again, depending on a host of circumstances, varies in almost every individual. The effect then must be a diversity of movements, some deviating slightly only from the healthy action, others almost instantly counteracting that process, producing the utter extinction of life in a moment. Between these extremes there must be an infinite variety in the grade of effects ; and it would be perfect nonsense to contend that they all have the same tendency, namely, to unload the system, and re-establish health. They all depend on fortuitous and adventitious circumstances, and are never to be trusted, but moderated, counteracted, and supplanted.

For the removal of irritative fevers, there are but two methods justly entitled to the appellation *curative*. The one is, that of raising, and permanently maintaining an action more powerful than that which constitutes the disease, and whose influence we are able to control at pleasure. It most frequently happens, however, that the morbid action is so violent; that a greater cannot be raised consistently with safety. Few diseases are, therefore, remediable on this plan. Intermittents and mild remittents are the principal. When from the nature and intensity of the action, this method is deemed inexpedient, we have the other plan left. To change the order of diseased action, derange or break up the morbid concatenation, and thereby give the healthy the advantage over the morbid action. This is merely inverting the order of the causes and remedies of irritative fevers. We make disease and health, or rather the exciting causes and vitality, the pre-disposing causes, and the remedies antagonizing powers. I have stated that the pre-disposing causes, by deranging and breaking up the healthy concatenation of action, gave exciting causes the advantage, and disease ensued. I shall now show how the remedies, by deranging and breaking up the morbid concatenation of action, gave vitality the advantage, and health ensued.

The first indication of cure, therefore, was to destroy the morbid action or concatenation, and thereby give the powers of vitality an opportunity of raising a healthy process over the diseased one.

The second indication was, to remove all concurring causes of the disease.

The third was, to support the powers of vitality, and thereby enable them to maintain the ascendency they had acquired. It will be readily observed, that the third indication is entirely dependent on the first, and must therefore immediately follow it, though they cannot both be fulfilled simultaneously.

The second indication is merely accessary to the first and third. For the purpose of fulfilling the first indication, it was my constant aim to restore the equilibrium of vascular action and nervous power. To this end I prescribed an emetic in every case. In young and robust subjects of rigid fibre, I frequently selected the tart. antimon. et potass.; but in all other cases I preferred the combination of ipecacuanha and tart. antim., in the proportion of 15 grains of the former to two grains of the latter, to be taken at a single draught. The emetic was not given with a view to its evacuant effect, and in fact I seldom prescribe them for that purpose, not perhaps once in ten times. What little bilious matter they evacuate is of no consequence, and often was not in the stomach previous to emesis. It is not the action of the emetic on the stomach only, but the shock given to the whole system, on which its curative power depends. They thus restore the equilibrium of nervous power, propel the blood through the veins with increased velocity, and recuscitate their sinking powers. It is by the veins that absorption is principally performed, according to Magendie, and if so, their action must be increased, for tumours on distant parts of the body are rapidly diminished during emesis. Thus by increasing the action of the veins, diminishing that of the arteries, throwing open the capillaries, and concussing the living fibre, the equilibrium of the circulation and nervous power is restored, and a truce given for the healthy action to arise. Thus I have known the disease suspended several hours, and sometimes wholly subdued. I always took the advantage of this recess, to keep up this uniform diffusion of action by diaphoretics. If this was neglected, little or nothing was often gained. The impression subsided, and the same train of morbid actions was again developed, and demanded the same means. The sudorific I commonly prescribed, was a powder composed of compound powder of ipecac., (Dover's powder) from four to six grains, with two or three of camphor every hour or two. Another prescription, more convenient and equally efficacious, was spts. nit. dulcis, saturated with camphor five parts, tinct. opii one part, in the dose of 40 drops every hour or two, in some warm vegetable infusion, the choice of which I generally left to the patient. After continuing this process eighteen or twenty-four hours, a laxative was usually administered, so mild as not to produce a powerful determination to the intestines, as this would suspend the sweating process, and tend to produce metastasis to the internal parts. For a cathartic I used oleum ricini ; fol. sennæ and sulphat. magnes., or a combination of senna, manna and super tart. potass. The principal concurring cause of the disease, is irritating matter in the stomach and intestines. The gastric secretion and nervous influence on which digestion wholly depend, being interrupted, that process is suspended ; hence every substance received into the stomach, readily runs into the acetous or putrefactive fermentation, as the nature of its constituents may be, and thus becomes a source of irritation. Moreover, substances are poured into the intestines, even those absorbed from the surface of the body. It therefore becomes necessary, daily to move the bowels gently, and with as little irritation as possible, for *ubi irritatio ibi fluxus*, and the skin must suffer a proportionate diminution of action and energy, for by fluxus we must understand a flow, not of the fluids only, but of the nervous power also.

If this sweating process did not effect a recess or remission of the symptoms in twenty-four hours, I always repeated the emetic and sudorific plan daily, or every second day; and this I was sometimes obliged to do six or eight times.

The use of emetics is so common, that almost any one feels competent to prescribe them, yet no medicines require nicer management to insure their success. Many physicians think they have done their whole duty when they have ordered a dose of *tartar emetic.* But an emetic should be so managed as to produce a universal effect. To this end it should operate severely. It should be accompanied with copious draughts of warm vegetable infusion, to keep up the action of the skin, which should be kept steadily warm by bedding. Towards the close of each paroxysm of vomiting, it should be alternated with warm draughts, containing spts. nit. dulc. and if the emesis threaten to proceed too far, a few drops of the tinct. opii may be added to each draught. If their operation be severe, inflammation of the stomach will be induced; to this organ will all the energies of the system be directed, capillary action will be suspended, and perspiration destroyed. The skin will indeed be bathed in cold moisture, differing materially from that relieving congenial sweat, which proceeds from increased capillary action. It is merely the oozing out of perspirable matter from exhausted capillary tubes, serving no other purpose but to exhaust. This collapsed state of the surface, so often attendant on sub-acute fevers, is frequently mistaken even by medical men for diaphoresis, and they tell you he perspires freely, without distinguishing a sweat from collapse, from a sweat from increased capillary action.

By persevering steadily but undeviatingly in this plan, the disturbance would generally decline, and subside materially about the fifth, sixth, or seventh day, sometimes not till the tenth or twelfth; we must then call in immediately the aid of our

Third indication, which was to support the powers of vitality, and enable them thereby to maintain their ascendency.

To fulfil this indication, I relied almost exclusively on two articles; carbonas ammoniæ, and oleum terebinthinæ, or common spirits of turpentine. The first was administered when, besides supporting the powers of life, it was necessary to assist diaphoresis: the last was used when that process was established, and an action concurring with the healthy, necessary only to be supported. It is unnecessary to state that the first was demanded earlier than the last. "It may in general be given at a much earlier stage of the disease than other remedies of this kind."* "In one respect the volatile alkali differs from every article of the class to which it is attached, and it would seem, from all other medicines. The peculiarity to which I allude is this, that the excitement it raises, approaches more nearly to that of healthy action."† To the verity of these remarks I can bear full testimony. Its utility could not be more strikingly evinced in any disease, than in the latter stage of our epidemic. It acted frequently like a charm, producing diaphoresis and healthy excitement. The spirit of turpentine is another article of this class, deserving more attention in the decline of fevers than it has received. Its effect on the general system is certainly concurrent with healthy action. It did not occur to me till towards the close of the epidemic. I used it in seven cases only myself, but have the report of its use in four others. It had a double operation; for being directed to be taken on sugar, it was applied directly to the fauces, and operated then as an efficacious counter-irritant, whilst its action on the system, except that of producing diaphoresis, was equally as pleasant as that of the carbonas ammoniæ. Instead of aggravating the irritative action, as one would *a priori* expect, it calmed the pulse, relieved wandering pains, and produced a more permanent action than the carb. ammon. Should the disease again return, I should place my chief reliance on this article, after the preparatory process just described.

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* Eberle's Therapeutics. † Chapman's Therapeutics.

When the action raised by the carbon. ammon. failed, and the morbid process again obtained, I had only to repeat the emetic, and again the carbon. ammon. would produce all its happy effects. This I have had several times to do. I gave it in doses of about four or five grains every hour or two, so as to keep the system constantly under its influence. The dose of spirits of turpentine, was from ten to thirty drops every hour or two, as the patient was less or more collapsed.

Another article that would seem to deserve a place in the class calculated to fulfil our third indication, is the Peruvian bark. This was also employed by other practitioners, and by myself a few times, and sometimes with a little seeming advantage. The only condition in which this article, or the sulphate of quinine, was beneficial, was in cases where gangrene had commenced about the fauces. Even in this condition I afterwards derived more decided and prompt relief from the oil of turpentine, given in doses of thirty drops every hour. Under its use one recovered, whose uvula had gangrened and sloughed off. The bark was not only useless, but in all protracted cases it was highly injurious; for the inflammatory diathesis, which was developed by the continuation of the disease, rendered it a concurring cause. I knew it prescribed for a young man in particular, for the gangrenous state of his palate, which was subdued. His debility induced his attendant to continue the bark at intervals of every few minutes. Under this treatment he continued to grow weaker, and after several weeks died a mere skeleton. This inflammatory diathesis seemed to be confined to the nervous texture, and principally to the great sympathetics. I have seen several of these cases, so peculiar and intractable, that their history would fill a volume. The pain was confined principally to the abdomen, and was aggravated by depletion or stimulation.

LOCAL APPLICATIONS.

The local external applications to the throat were fomentations, and the application of warm vegetables, as hops, poppy leaves, &c. These during the sweating process were very serviceable, especially when accompanied by the inhalation of steam into the fauces. The internal application found most beneficial was steam of any kind. The relief obtained from this, when any difficulty of breathing from spasms of the larynx was present, was very striking. In the more advanced stage, the pepper gargle, mentioned by Dr. Thomas for putrid sore-throat, was very useful. It consisted of cayenne pepper, vinegar, common salt. When cayenne pepper could not be obtained, the common red pepper (capsicum annuum) answered every purpose.

When the inflammation had passed from the fauces through to the face, different applications were used by physicians. I soon discovered, however, that the local depended on the general affection, and that nothing would conquer the former until the latter was subdued, which limited very much the benefit of any local application. After the general irritative action was moderated, I used the following liniment. Spts. turpentine, brandy each two parts, aqua ammonia one part, to be shaken previous to its application. Soft muslin cloths dipped in this and applied, had a very good effect. It operated as a counter-irritant, producing a new action, and permanently maintaining it. Its effect on erysipelas from vegetable poisons is frequently surprising.

Having now gone through what I conceive to be the regular form of the disease, I must bestow some attention on the anomalies or misplacements. These were generally of a more serious nature, for by them most of the deaths were induced. When any part of the body whatever was attacked, the most successful general treatment was, in the first stage, invariably the same as in the regular form already described. But when the stomach, intestines, or bladder, was the seat of location, the system after an emetic and the sweating process, was more prone to collapse, and death sometimes suddenly ensued, unless the *vis vitæ* was roused. For this purpose no one would give an ordinary emetic, yet on that very process peculiarly managed, the patient's life depended. For an emetic under such circumstances, I gave a powder every hour, of ipecac. twelve grains, opium one and a half or two grains, camphor three grains. These raised the sinking powers, and produced a warm and genial perspiration previous to emesis, which seldom succeeded before the third or fourth hour. The action thus raised, was then kept up by means already pointed out. In these locations, laxatives, though they could not be dispensed with, were for obvious reasons necessarily used with great caution.

Whether the affection of the abdominal vicera was primary, or the effect of metastasis, the disease was the same, with this difference only. In metastasis the system collapsed sooner, for the irritative stage was partly spent on the original location. The practice of giving emetics in gastritis and enteritis being so strictly prohibited by all pathological principles, I could not, at first, persuade myself to adopt them in affections of the abdominal viscera, notwithstanding their utility in other locations. So difficult is it to divest one's self of early impressions and scholastic dogmas. After having had my feelings shocked by the death of an amiable patient by intestinal location, treated on the plan of Armstrong, I determined on the future use of the emetic plan in such cases; and I must be permitted to say with uniform success. After two or three paroxysms of emesis, that sinking and distressing pain of the epigastric or intestinal region, vanished often to return no more. When it did recur, however, I repeated the same process as in the regular form of the disease, and obtained the same results.

When the other locations, such as the fingers, toes, glands, &c. were affected, they were attempted to be discussed by anodyne poultices of hops, poppy leaves, conium, &c.; and when the general disease terminated soon, this plan succeeded very well. But when the case was protracted six, eight, or ten days, they invariably suppurated and discharged a great quantity of pus, the formation of which was accelerated by soft poultices.

Having detailed the plans of treatment found most successful, it now only remains for me to give a sketch of some of the most leading unsuccessful attempts at cure, for it is not to be presumed that a correct and uniform plan should have been at once adopted; the first is,

VENESECTION.

How the remote causes of fevers, or how any agent should produce an adynamic state, or direct debility in a healthy yeoman, without any evacuation, is yet to be learned. But in this section of the country this is the fact. In no case which fell under my inspection had the pulse any tenseness or real resistance, but gave way on the least pressure, forming the gaseous pulse of Tully and Miner; consequently, I never unsheathed the lancet. Others, however, did in a few cases, and a few only, for conviction soon followed. They perceived what they called a *high pulse*, and a *high pulse* necessarily suggested the necessity of a low pulse; hence they bled, and often reduced it so low, that it never rose again. Thus fell a neighbouring physician of no inconsiderable experience and acquirements.* After venesection his pulse sunk, and with all the stimuli that could be employed, it never rose, and he expired on the fourth or fifth day. The diathesis of the atmosphere in this section of the country, or of peoples' constitutions, has been so modified ever since the prevalence of the *winter epidemic*, called *pneumonia typhoides*, that no fever has since occurred to me, demanding venesection. In that epidemic the lancet slew its hundreds. Many physicians presuming vascular action to be suppressed or weighed down by an over-load, determined to let the blood flow until the pulse should rise. The consequence was, as might have been expected, many died almost instantly. I knew an elderly lady die before the physician had got a mile from her.

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* Dr. Ira Patch.

I do not, however, like Tully and Miner, universally condemn the practice. In other places, and at other times, the diathesis of the atmosphere, or of peoples' constitutions, may be reversed, and the means imperiously demanded. But at present, in this section of the country, no man who has the use of his fingers and eyes need ever be deceived.

CALOMEL.

This has been such a favourite febrifuge ever since Dr. Chisholm arose in the might of his power, and hurled destruction amongst the fevers of Grenada, that it is not surprising it should have been adopted in this epidemic. Indeed, I was firmly persuaded that salivation, by producing a new and permanent action in the glands of the throat, and throughout the whole system, would supplant the disease. In this, however, I was soon undeceived, for the second case that occurred was doubly aggravated by its use. Nevertheless, I could not so soon abandon a favourite opinion; and it was not until I saw a complete salivation continue a week or more without the least amelioration of the local or general disease—the sore throat and sore mouth very neighbourly marching on together without the least interference. It was therefore evidently a concurring agent in the development of the disease—and this was the uniform testimony of all whose practice gave them an opportunity of testing its efficacy. Mercury is undoubtedly able to arrest the action of some fevers; but feeble indeed must be that febrile process which is capable of being supplanted by the specific effect of calomel.

Mercury not only failed to counteract the disease, but was actually a predisposing cause, thereby favouring its development in subjects who might otherwise have escaped. This effect occurred in three instances. They were all delicate females, and were taking mercury for chronic affections of the liver. The first occurred during the height of the epidemic. She was on the use of calomel, pulv. antim. and nit. potass. The second was on the use of the blue pill. They both had the distinctive characters of the disease, both generally and locally, for no other sore throat resembles this.

The third was taking the blue pill, and had the disease severely. Her throat and gastric affection alternated several times, and she recovered after having been in a hopeless state several days. They were all persons of choleric temperaments, and the last one remarkably so. The first two had been taking mercury only a few days, and the other several weeks.

BLISTERS.

It may indeed seem strange that I have made no mention of blisters; but their proper place is amongst the unsuccessful means. At first we all uniformly used them, and drew them from ear to ear across the neck, over the breast, &c.; but we all as uniformly abandoned their use about the same time without any understanding between us. They produced no good, not even in internal locations, but on the contrary, they rather aggravated the pain. The lady who died of the intestinal location under the Armstrong plan of treatment, was blistered over the whole abdomen after her calomel failed to answer my expectations. Other cases occurred similar to this, and under equally unfavourable circumstances, yet they all yielded to the emetic and sudorific treatment.

When we consider that these local affections are not phlegmonous, but erysipelatous inflammations, or more properly, erysipelatous actions, our surprise at their failure ceases. A lady was seized with the location in her finger. Her physician enveloped a part of it in an epispastic plaster, and just as far as the blister extended, the finger gangrened, and had to be removed. It was evident they were concurring agents. I found them of some service in protracted affections of the bladder, attended with strangury. They were applied to the loins, and across the upper part of the os sacrum. The idea that their application to the vicinity of the kidneys or bladder is apt to produce strangury, is purely chimerical. I as often apply them on those places as on any other, and I never saw strangury arise in a single instance. The worst strangury I ever witnessed arose from a blister across the scalp for an old injury of the head.

ART. VII. *A new theory of* CONCEPTION, *founded upon well known laws of nature, in accordance with which the principles of superfœtation are explained, and facts adduced to prove its repeated occurrence.* By JOHN STEARNS, M. D. of New-York, late President of the State Medical Society.

Read before the Physico-Medical Society of New-York.

EVERY thing relating to the reproduction of man is interesting and important. A few remarks upon this subject, in connexion with the exploded doctrine of superfœtation, will consitute the theme of this communication. Scarcely a doubt was entertained by the ancients, of the possibility of a second conception by an impregnated uterus. But although many cases have occurred in the history of medicine to fortify this doctrine, it has for a long time been considered as physically impossible. The perfect closure of the os uteri immediately after conception, which renders it impervious to the semen in a subsequent *coitus*, has been urged as an insuperable objection, and so conclusive was it considered, that scarcely an effort has since been made to revive the former opinion. A proof of the paramount influence of theory over facts. Convinced however by some strong cases, of the reality of superfœtation, Dr. Dewees attempted to prove its possible occurrence, and to obviate all existing difficulties and objections, by assuming a different theory of conception. He considers the seminal fluid to be absorbed in the vagina, and conveyed thence directly to the ovarium, by appropriate vessels denominated *seminal absorbents.* In confirmation of this opinion, he cites several cases in which the vagina was so obstructed, or the parts so deformed, as to prevent the transmission of the semen into the cavity of the uterus; and that even in these and other similar cases, conception had actually taken place.

If then *coitus* occur while a fœtus occupies the uterus, and the absorbed semen meet with an ovum capable of being influenced by it, that ovum will be impregnated, the ordinary changes will take place in the ovarium, the ovum will escape into the Fallopian tube, and thence be conveyed to the uterus, where it will meet a feeble resistance from the membranes which already line the uterus: this resistance will soon be overcome, and the new ovum will effect a lodgement by the side of the other, with its own peculiar membranes, water and placenta. This summary exhibits a general view of the theory of superfœtation upon the principle of absorption. But as it entirely rests upon the assumed basis of undiscovered vessels, I deem its admission incompatible with the maxims of sound philosophy. For the same reason I am compelled to reject the theory of the absorption of the semen by the veins, its mixture with the circulating mass, and subsequent deposition upon the ovarium.

After a careful review of all the systems projected for the reproduction of man, no one appears to be so perfectly consonant to reason, to the simple operations of nature, and to accurate observation, as the one which was adopted by the ancients, and sanctioned by some of the most distinguished moderns. Uninfluenced by preconceived theory, every one would naturally consider the uterus as designed for the immediate reception of the semen and ovum, and the vagina as the plain and direct path for the course of the former, and the Fallopian tube for the latter; nor would they ever suspect that the semen was to be diverted from this natural passage into the devious course of the circulation, or transmitted by any extraordinary process, through undiscovered vessels directly to the ovarium. Such complicated explanations are at variance with the uniform simplicity of nature's laws, and that sound maxim which interdicts the use of more causes to explain a phenomenon than are actually necessary. That conception cannot take place in cases of obstructed vagina, or of other deformities which prevent the perfect apposition of the penis and os uteri, except upon the principle of absorption, is an assumption entirely gratuitous. Although conception may be rendered more certain by such apposition, I do by no means consider it indispensably necessary, for reasons now to be explained, and which I trust will be found exempt from those difficulties, which gave origin to the theories of absorption.

The fundamental principles of conception, may be considered as contained in the following propositions.

1st. The semen passes directly from the vagina into the cavity of the uterus.

2d. The female ovum passes directly from the ovarium through the Fallopian tube into the same cavity.

3d. The ovum receives its first impregnation in the uterus, and not in the ovarium.

Hippocrates, Galen, and most of the ancients, and Haller, Richerand, Blumenbach, and other distinguished moderns, are among the advocates of the first proposition. Richerand observes, that conception is most certain immediately after menstruation, as the os uteri then dilates more easily to receive the male semen. But this proposition acquires the strongest confirmation, from the repeated discovery of semen in the uterus, immediately after *coitus*.

Ruysch also discovered it in the Fallopian tube: and although some of the advocates for absorption think he was deceived, we have more reason to believe the demonstration of this accurate and indefatigable anatomist, than the mere assertions of those who have a favourite theory to sustain. As the truth of the first proposition rests upon the basis of actual demonstration, the highest of all testimony, and is clearly elucidated by subsequent explanations, it is needless to adduce weaker evidence, or the multiplication of other proof.

Although the direct passage of the ovum through the Fallopian tube, and its first impregnation in the uterus, are not susceptible of equal demonstration with the first proposition, we may however confidently appeal to the ancients, to many distinguished physiologists of later times, and to the clear and satisfactory explanation of conception upon this principle, for the truth and consistency of the two last propositions.

Blumenbach's theory of *nisus formativus*, is founded upon the same hypothesis. The occasional discovery of male semen, and of a fœtus in the Fallopian tube or extra-uterine, does not invalidate this opinion, but may be considered as entirely accidental, unnatural, and dependent on the operation of the same power which naturally impels the passage of the semen and ovum into the cavity of the uterus, and which I shall now proceed to explain.

It has already been remarked, that an apposite union of the penis and os uteri, is not indispensably necessary to ensure conception.

If then a power can be demonstrated which exerts a synchronous impulse to the male semen and female ovum, by which both are equally impelled from their respective points of departure, the former from the vagina through the os uteri, and the latter from the ovarium through the Fallopian tube, till both simultaneously arrive at the fundus uteri for the purpose of conception, I trust that the usual objections of deformity, obstructed vagina, and inaptitude of parts, will be perfectly obviated.

In its natural condition the uterus has no sensible cavity, its parietes being every where in close contact. But in *coitu* the parietes dilate and expand, thereby producing a cavity proportioned to the violence of the orgasm, and a vacuum proportioned to the extent of that cavity. This vacuum will be most perfect at the height of the orgasm, and its greatest power will then be exerted to attract the semen from its location in the vagina, to its destination in the uterus. This vacuum will be continued by the perfect closure of the contracted vagina, till the process is sufficiently matured, when the succeeding relaxation will admit the external air, to give additional impetus to any portion that may be impeded by intervening obstruction. If, therefore, any preternatural obstruction, deformity, or inaptitude of parts prevent the approximation of organs, by which the semen is deposited in the vagina, remote from the os uteri, and the excitement be sufficient to produce the orgasm and expansion, the operation of this principle will impel the semen into the uterus, and produce conception. The same cause will also procure the transmission of the seminal fluid through the aperture, in what has been denominated an imperforated hymen, which admits the usual passage of the menstrual discharge. It must, however, be remarked, that in all these cases, the os uteri, by the same convulsive orgasm, descends into the vagina eager to meet and absorb the seminal fluid: and I have no doubt that where obstructions exist, in cases of successful conception, a sufficient opening for its transmission, may always be discovered.

That the same principle of attraction impels the ovum from the ovarium, through the Fallopian tubes to the uterus, I infer from the following considerations.

The Fallopian tubes are equally and simultaneously excited with the uterus. Their sides expand, become rigid, and their cavities are enlarged. Their fimbriated extremities dilate and closely embrace the ovaria, thereby constituting an uninterrupted vacuum from the os uteri to the ovum, which is thus attracted from its location in the ovarium, and impelled by the continued operation of this principle, through the tube to its destination in the uterus, where it meets with and receives its first impregnation from the seminal fluid.

That the arrival of the semen and ovum at their point of union in the uterus is simultaneous, is probable from the equal distance of their respective points of departure from the fundus uteri: the distance of the latter from the ovarium and os uteri being precisely the same.

As conception by this theory requires a perfect closure of the vagina, a suitable orgasm, and a simultaneous meeting of the semen and ovum in the uterus, it must be obvious that where either fails, sterility must ensue. The cause of this failure may be attributed to constitutional apathy, to disease, or to an unnatural abuse of the organs by which the vagina will become relaxed, or the uterus unsusceptible of the necessary excitement.

I trust it is unnecessary to quote authorities to prove the changes which I have described, and which are familiarly known to every physiologist. I cannot, however, refrain from extracting the following remarks from Blumenbach in corroboration of the preceding theory.

"The uterus becoming turgid by a species of inflammatory orgasm, drinks in the seminal fluid, and at the same time effects the discharge of a fluid peculiar to itself. The Fallapian tubes at the same time become rigid, embrace the ovaria with their fimbriated extremities, which thus burst the ovum, and absorb its albuminoid fluid, which is then conveyed by the tubes to the cavity of the uterus. Women, who are indifferent to this stage of the orgasm, have often perceived these changes to take place in themselves, and have thus been made certain of the time of their conception."

Richerand also says, "the uterus attracts the semen by a real aspiration."

This "drinking in of the seminal fluid," according to Blumenbach, or, "its attraction by a real aspiration," according to Richerand, can be explained upon no principle but the one which I have already advanced. And although many writers ascribe to the uterus precisely the same operation, I have never seen any satisfactory explanation of the power which impels the seminal fluid into the uterus.

If the preceding remarks justify the conclusion that the semen and ovum enter directly into the uterus, we must necessarily infer that the latter receives its first impregnation in that cavity, and not in the ovarium. This opinion acquires confirmation from some distinguished writers of antiquity, and also from its analogy to that simplicity which uniformly pervades the works of nature. The power which I have assumed to give impulse to the semen and ovum, is precisely the same that impels the air into the lungs, and the blood into the ventricles of the heart, and why not the former into the uterus? These positions are plain, simple, perfectly intelligible, and exempt from mystery or intricacy of reasoning, and obviously conformable to the general laws and designs of nature, and if impartially investigated, will be found to have strong claims to the sanction of physiologists.

I cannot consider the discovery of the seminal fluid, or a fœtus in the tube, or in the cavity of the abdomen, as sufficient to establish the hypothesis that they have acquired this location by meeting some accident or impediment on their return from the ovarium. The more probable opinion is, that in its passage from the ovarium, the ovum has been retarded by some deficiency in the impellent power, or by some obstruction in the tube, while the semen has been propelled by more than ordinary force beyond its destination in the uterus, into the dilated mouth of the Fallopian tube, where it has met and impregnated the ovum.

All such occurrences are contingent aberrations of nature, and as unfit to form the basis of a theory, as to attempt to prove that club feet or four legs are natural to children.

From this summary view of conception, it will be perceived that the following changes are deemed indispensably requisite for its success.

1st. An excitement must be produced sufficient to expand and dilate the uterine organs.

2d. The vagina must be perfectly closed during the momentary dilatation of the os uteri for the transmission of the seminal fluid.

3d. A perfect closure of the os uteri must take place previous to its removal from the vagina.

4th. If the closure of the vagina be removed before conception be completed, it must be continued in the os uteri till the semen has reached its ultimate destination, impregnated the ovum, and the latter has acquired a firm attachment to the uterus.

Although the os uteri often continues closed to a late period of gestation, yet it is not absolutely necessary after the process of conception has been completed, and we consequently find cases in which it has been dilated without any injurious effects, and even menstruation regularly performed.

After this preliminary view of conception. we are prepared to resume the subject of superfœtation: and although under ordinary circumstances, I cannot believe in the possibility of its occurrence, yet so strong is the evidence adduced in its support, that scarcely a doubt remains that it has sometimes taken place. Such cases are indeed extraordinary, and can be explained only on the principle of a double uterus, or a longitudinal septum that divides the uterus into two distinct cavities. That such instances do sometimes occur is abundantly proved by the records of medicine, one of which is described by Mr. Pole in the 4th volume of the memoirs of the Medical Society of London. "A septum of considerable thickness," says Mr. Pole, "ran between the organs which formed two distinct and complete vaginæ, as well as two uterine cavities." Dr. Tiedman communicates a similar case, the preparation of which is in the Museum of Heidlebergh; he says, "the vagina and uterus were both double, the latter of which was distended from impregnation. The left uterus was in the condition as it usually is after delivery, the person from whom the preparation was taken having died on the nineteenth day after parturition. The right uterus had all the appearances which those who have never borne children usually possess." In the same communication he alludes to two similar cases which he had met with on former occasions.

According to the preceding theory of conception, it must be obvious that although one of those cavities in a double uterus be occupied with a fœtus, yet the orgasm may be excited, and a vacuum produced in the other sufficient for all the purposes of a second conception, analagous to what takes place in brutes. Their uteri are divided into different cells. The ovum does not pass into the uterus, nor does the os uteri close so soon as in the human subject. A bitch will consequently admit a variety of dogs while she is in *season*, and will bring forth puppies of each different species. Each cell becomes the receptacle of its appropriate conception, and similar to what occurs in the human uterus, is probably closed at the same instant for the exclusion of the external air, and the preservation of the vacuum within. Thus each cell performs separately all the functions of a complete uterus, till conception has been perfected in each, and the os uteri finally closed upon the whole.

Dr. Dewees observes in explaining his theory of conception, that superfœtation is not only probable, but that it is surprising it does not more frequently take place. Upon his principles I perfectly concur in his opinion, that it ought to be a common occurrence, but on the principles which I have advanced, it must be as rare as the existence of a double uterus.

After this exposition of superfœtation, I shall refer to a few instances to prove that it has actually taken place; and should it hereafter occur to the observation of any practitioner, it would be very desirable to ascertain by dissection after the death of the mother, the true condition of her uterus.

A variety of cases of superfœtation may be found in the writings of Harvey, and in the records of ancient medicine; but the cases recorded by Dr. Dewees in the first volume of the Philadelphia Medical Museum, which occurred in his own practice, are related with such minute and extraordinary co-incidents, as scarcely to admit of a doubt that the two fœtuses were the offspring of two distinct conceptions, and of two different fathers.

This opinion is still more strongly fortified by the circumstances of a case stated in the twenty-third volume of the New-York Medical Repository by Dr. Norton. The prominent facts are, that a coloured single woman was delivered of a fœtus with the features, character, and colour of a negro, apparently in the eighth month of pregnancy, aud in a few hours after of another fœtus with the regular features, character, and colour of a white child, apparently in the fourth month of pregnancy, both of which exhibited signs of life. As I can attest from personal observation to the accuracy of this statement, I have no doubt from all the circumstances of the case, that this was a decided case of superfœtation.

Art. VIII. *A Case of* Exostosis *of the* Os Ischium *impeding delivery.* By Charles Drake, M. D. Physician of the Bellevue Establishment.

In volume first, page 57 of this Journal, is recorded a case of pelvic tumour obstructing parturition, which was opened, and so far diminished in size by the removal of fleshy and bony substances mixed with blood, as to have permitted the favourable expulsion of the child *per vias naturales*, had the other circumstances of the case rendered such an event feasible. The subject of this case in her succeeding lying-in came under my care, and its unfavourable termination gave me an opportunity of ascertaining by autopsic inspection the nature of the impediment to delivery. It is therefore proper that I should give publicity to the facts as they came under my view, in order to correct the misapprehensions that were formed of the nature of the preceding pregnancy; namely, that it was a twin conception, in which one was extra-uterine, forming a vaginal tumour, whose remains it was necessary to extract before the uterine fœtus could be brought away. Dr. Francis, in his edition of Dr. Denman's Introduction to Midwifery, page 354, doubtless refers to this case, and gives its true character, but without attempting to correct the error of his friend and colleague, or even, which is very surprising, mentioning its having been the subject of a former record in a journal he aided in conducting. The case would have been given to the public before, had I not been restrained by circumstances which I could not control; but as those circumstances have now ceased, and the sequel of the case is interesting on many accounts, I communicate it for public record.

The woman fell into labour about noon, but the house-physician was unable to attend upon her until 4 o'clock p. m., when he found her enduring powerful and rapid labour pains, the waters discharged, and on examination per vaginam, the head considerably advanced in the pelvis, with the hairy scalp more tumid and protruding than ordinary. After waiting at the bed-side a considerable time, he made a second examination, and to his surprise, although the pains had been strong and frequent, he found that the head had made little or no advance, but the soft parts were evidently becoming more and more detached from the bones, and assuming a purse-like form. The woman now gave him to understand that her preceding delivery had been attended with untoward circumstances, which he recollected to have read, and on referring to the case, and comparing the recorded facts with the present difficulties, he was led to conclude that they constituted in the present instance a case of impaction, merely arising probably from some straitening of the passage, proceeding from cicatrization of the wound made at the previous delivery, and which would finally be overcome by the pains, still powerful and rapid; at any rate he could not conclude from the previous history of the case, that there existed any insuperable impediment to the transit of the child through the pelvic cavity, and he determined to wait patiently the natural efforts of parturition. Finding at 11 o'clock P. M. the woman beginning to become exhausted, and the pains remitting in force and frequency, he gave her a full dose of the infusion of spurred rye, which in fifteen or twenty minutes renewed the pains with redoubled violence. They continued with fearful energy for a few minutes, when they suddenly and entirely left her, and she fell into a state of exhaustion, attended with restlessness and anguish, referred to the gastric region, which state continued during the remainder of the night. On the cessation of the pains, an examination discovered the head to have retreated considerably, and a firm unyielding tumour occupying the right side of the pelvic cavity, sufficiently hard to form an effectual barrier to the passage of the head. Early in the morning I was sent for to advise in the case, and at 8 o'clock I found her without the least indication of being in labour, but in a state of perfect collapse with the pulse extremely small, and running at the rate of about 150, the skin cool, and covered with a viscid perspiration, hiccup, continual jactitation, complaint of deadly languor and indescribable distress referred to the gastric region, attended with frequent gulping and throwing from the stomach a glairy fluid containing much black flaky matter resembling tinder. On examining per vaginam, I perceived the head lying unlocked above the tumour, easily admitting of being moved or pushed up. There was now little doubt that the uterus had given way, and the child forced into the abdominal cavity; nevertheless the woman's present condition forbade the adoption of any means to relieve her, without the probability of adding to her present distress, and perhaps accelerating the fatal moment. She was accordingly resigned to the soothing attentions of her friends. She died at 2 o'clock the succeeding morning, twenty-seven hours from the time the rupture of the uterus occurred.

At 11 o'clock, nine hours after death, the body was examined in presence of my friends Drs. Manley and Anderson. On laying aside the integuments of the abdomen, the whole of the child, except the head, was found extended upon the abdominal viscera. The rent in the uterus was in its anterior part, and extended from its neck nearly to the fundus. There was no trace of previous disease in any of the internal organs of generation, if we except an extremely small fistula communicating with the tumour, and discharging fœtid matter into the vagina. The shape of the tumour was nearly semi-globular, with an extensive base; its size was not ascertained by measurement, but I should say its diameter at the base was rather more than two inches, and nearly two inches in its highest elevation. On cutting into it, it proved to be an exostosis from the inner side of the right ischium, just above the tuber and posterior to the foramen ovale. It was composed of thin laminæ in a state of caries, and contained cartilaginous, bloody, and grumous substances.

ART. IX. *Account of a Case of injury of the* KNEE-JOINT. By WILLIAM F. SEAMAN, M. D. of New-York.

R. D. a stevedore, aged forty-five years, while engaged on the 22d of 2d month, in unloading one of the Liverpool packets, was struck on the left shoulder by the iron hoisting wheel employed to raise the cargo from the hold, the fastening of which gave way during its use. It was computed to weigh about 50lbs. and fell from the height of about twenty-three feet, upon the shoulder a little behind the clavicle: it forced him down upon the deck in such a manner, that his left knee was violently driven against the side of the hatchway, and the wheel sliding at the same time from his body, was received on the thigh over the external condyle of the os femoris, where it produced a considerable contusion and a slight wound.

He was immediately conveyed home, where I first saw him about two hours after the accident; his leg was extended, and great tumefaction had supervened, so that it was impossible to flex the knee in order to make the necessary examinations of the state of the limb, without occasioning the most excruciating pain. It was evident, however, although some deformity was present, that this was owing to the irregularity of the tumefaction, that the joint was not dislocated, and that if fracture existed, the bones were in their natural situation.

His scapula was fractured by the blow, in a direction downwards and forwards through the spine and body of the bone. This was readily reduced, and maintained in its natural position by a compress secured by the figure of eight bandage, and by attaching the hand and arm to the chest, to render it immoveable by means of a roller.

He was freely bled from the arm, and ordered a dose of the sulphate of magnesia, and the joint enveloped in cloths wet with spirituous acetous lotion.

On the 23d, the tumefaction had increased considerably, with the pain, fever, and other symptoms of inflammation. He was again freely bled, and the purgative repeated.

On the 24th, his pulse was considerably reduced, but his fever still continued. He was ordered small doses of the nitrate of potass, with tartrite of antimony.

On the 25th continued the remedies.

On the 26th, his nights became restless, but little fever and no sleep. Continued the powders with half a grain of opium to each dose, and an anodyne at bed time.

On the 27th and 28th, the symptoms much the same; the powder, though continued, produced no sleep; doubled the quantity of opium.

On the 1st and 2d of 3d month, still no sleep; bowels regular, and febrile excitement but little; the limb, however, much swelled, and increasing in size both upwards and downwards. Applied a bread and milk poultice to the knee, enveloping the whole extent of the tumefaction; continued the opium with the addition of two grains of camphor to each dose.

On the 3d continued the remedies.

On the 4th, the limb was nearly double the size of the sound one, the pain somewhat diminished, and a sensation of deep fluctuation in the ham. A free incision was made in this situation with a lancet, and a large quantity of pus discharged. He was now ordered the bark in substance, and as the opium and camphor produced no sleep, although given to the extent of two grains of the former, and four of the latter every two hours, and doubled at bed time, it was discontinued for the tincture of hops.

On the 5th, the discharge was profuse, bathing the whole limb in ill digested pus or sanies; the cavity of the abscess occupied the whole extent of the ham, and extended upwards and downwards in the interstices of the muscles of the thigh and leg, but did not communicate with the cavity of the joint. Small vesicles appeared on the ham and knee, the patient's countenance became wild and staring, his pulse feeble, and mind delirious. The bark was continued with a liberal use of wine and the tinct. of hops; his poultices were smeared over with yest, and frequently repeated. This plan was pursued vigorously, with little variation from the 5th to the 15th, during which time the vesicles bursted, and sloughs formed which came away without difficulty, leaving ulcers of a healthy appearance. The quantity of matter discharged from the abscess had also daily diminished, but the wakefulness continuing, the tinct. of hops was discontinued for the trial of the extract of hyoscyamus, which was continued to the 20th with no better success, when he again returned to the opium, combined with small doses of the tartrate of antimony as a febrifuge. These, together with a blister, removed a slight inflammation of the chest, with which he was seized about this time.

The limb was now much reduced in size, the pus discharged from the ulcers of a better quality, and the sore began to granulate; his appetite improved, and sleep returned. On the 20th he took a cathartic of aloes, calomel and jalap, to remove costiveness and a slight feverish disposition that occurred; and on the 27th, the effervescing draught of Riverius for the same purpose.

On the 1st of 4th month he was perfectly free from fever, his strength rapidly returned, and his ulcers healed kindly, under the use of the calamine cerate.

The fracture of the scapula united .without difficulty or deformity in the usual period, and in the beginning of 5th month, he was perfectly restored to health. In attempting to walk, however, he was sensible of a grating noise in the affected knee: upon examination it was evident that a considerable portion of the outer condyle of the os femoris had been broken off by the blow within the joint, in a direction obliquely downwards and inwards, and had never reunited. It left no other inconvenience than a difficulty in flexing and extending the leg in going up and down stairs, or similar occasions requiring extensive motion. His walking on a level was free from pain and natural, and the joint in no respect deformed.

From the nature of the foregoing case, it is evident that very considerable injury may happen to the knee-joint, and not require the amputation of the limb; and that a large portion of bone constituting a part of a joint, may be fractured from the body of it, not reunite, and remain in its cavity without producing a destruction of its functions.

It also adds one more case to those recorded by Astley Cooper, tending to prove that fractures of the extremities of bones within the capsular ligaments of the joints, do not unite by bony union, nor in this case, as in that in the cavity of the hip joint, does any decided union take place. It also contributes in a measure to controvert the theory of this celebrated surgeon, that the cause of non-union in these cases is attributable to "the want of proper apposition, or to the absence of continued pressure," as in this case the bones suffered no displacement, and the natural pressure was constantly maintained by the contraction of the surrounding muscles. It seems much more probable, that the want of union in these cases is owing rather to the constant immersion of the fractured extremities in the synovial fluid of the joint, than to any other causes hitherto assigned for it. The fact of the increased quantity of this fluid secreted into the joint immediately after an injury of this kind, so great in some cases as to prevent the perfect coaptation of the fractured extremities, as well as the circumstance that bones fractured in the shaft do not unite in the cavity of an abscess that continually bathes them in pus, strengthens the conclusion that this is the principal impediment to ossiffic, and indeed to every other union. Whether in these cases the evacuation of the synovia of the joint would not favour a union, must be left to future observation to determine; if so, our hypothesis becomes established as a matter of fact, and it would remain to consider how far its evacuation under certain circumstances might advantageously become an object of the chirurgic art.

Art. X. *Account of a Case of* Conversion of Disease. By John W. Gloninger, M. D. of Lebanon, Pennsylvania.

On the 12th of April last, I was requested to visit Philip Call, who had a few days before moved to this place from Hagerstown, in the state of Maryland, where he as well as most of his family had been much afflicted with the intermitting fever. From the statement he gave of his case, it appeared that he had a quotidian intermittent, which in the course of a fortnight, assumed a tertian type, with which he was regularly attacked for the last eleven months, during which time he had used, agreeably to the direction of the physician that had attended him, the most approved remedies without deriving much benefit from any of them. As he was complaining of pain in the left hypochondriac region, and as there evidently was an enlargement of the spleen, I conceived that a cure could not be achieved, unless he would undergo a mercurial course, to which he readily consented. I accordingly gave him a pill containing a grain of sub. mur. hydrarg. every morning and evening. In about twelve days a ptyalism was produced, when the fever disappeared, but instead of it, and precisely at the same hour, an *epistaxis* took place. Having returns regularly of the hæmorrhage, and having used ineffectually the usual remedies for the purpose of arresting it, I finally concluded to establish a purulent discharge by inserting a seton in his arm, and gave him sulphas cupri in nauseating doses, which happily had the desired effect, inasmuch as the epistaxis which had before been profuse, and occasionally alarmingly so, now gradually diminished, and in about six days entirely ceased; since then his health has daily improved, and now is perfectly re-established. As the cessation of the hæmorrhage might be imputed to the nauseating effects of the sulphas cupri, it may be necessary to remark, that notwithstanding it had been used for some time before the seton was resorted to, the epistaxis nevertheless continued, and the blisters which had been applied to the extremities and dressed with unguentum sabinæ, had not the effect that had been anticipated from their use, previously to their application. The quantity of blood lost upon each return of the hæmorrhage, and he had a visitation of it for twenty-four days, may on an average safely be computed at eight ounces. The prostration of strength was so great from the loss of blood, that had the epistaxis not been arrested at the time it was, several more recurrences of it must inevitably have proved fatal.

REVIEW.

Art. I. *A compendious* System *of* Midwifery, *chiefly designed to facilitate the inquiries of those who may be pursuing this branch of study.* Illustrated by occasional cases. With thirteen engravings. By William P. Dewees, M. D. Lecturer on Midwifery, &c. &c. 8vo. pp. 602. Philadelphia. 1824.

The rapid multiplication of systematic works in this country, is a striking proof of the change, which the condition of its medical literature has undergone within a few years. The period is not distant, when our physicians, having not the leisure, and wanting, perhaps, the boldness to compete with their transatlantic brethren, rested satisfied with exercising their pens altogether on detached subjects, and those chiefly of a local nature. That they were nevertheless competent to undertakings of a loftier character, was rendered sufficiently evident by the abundant talent and originality of thought manifested in their writings; and, accordingly, the opportunity did no sooner present itself, than they eagerly seized it, to free themselves from the thraldom of an indiscriminate reliance upon the labours of foreigners. The impulse once given was widely felt, and there is scarcely a branch of professional knowledge on which we do not already possess one or more systematic works calculated more especially to meet the exigencies of American students and practitioners. To the authors of the greater number of these, it is no more than an act of justice, warranted by the approbation of foreign critics, to award the highest merit, whether we regard the judicious practical rules they inculcate, or the talent and extent of research which they evince.

"The System of Midwifery" now before us, is destined, if we are not much mistaken, to an elevated rank among these, and fully answers the high expectations which the long and extensive experience of its author, and his previous valuable contributions to this department of medicine had so generally raised.

In the introduction, Dr. Dewees discusses a very important question, viz. whether labour being a natural act, does, or does not require the interference of art. In adopting the affirmative of this question, our author is by no means an advocate for the indiscriminate interference of art during healthy labours. This he justly considers no less improper than the opposite course. To us there seems to be more of an appearance of difference on this head among authors, than of real difference. Where a labour is healthy, that is to say, the construction of the pelvis is natural, the presentation of the child favourable, and the powers requisite in delivery competent to their functions, nature may be left to herself, not only with safety, but advantage, and the assistance of art is not only superfluous, but generally improper. In opposite circumstances there is no author whom we have as yet consulted, who is so injudicious as to recommend the accoucheur to look on tamely and see the lives of perhaps both mother and child wantonly sacrificed by a blind confidence in the imaginary omnipotence of nature. The question, therefore turns pretty much upon this point, whether the practitioner is warranted by the frequent occurrence of healthy labours to neglect all knowledge of art, and trusting entirely to the unbounded dominion of nature, become averse to all inquiry, and rest contented with supine ignorance. The answer is obvious: deviations from natural labour are not so unfrequent, but that they may in every case be anticipated, and not to be prepared for them would exhibit no less wanton temerity than wilful neglect, and the ignorance that would calmly regard the sufferings of a female in the most interesting and anxious situation which can occur to her in life, is equally culpable and cruel. Whether the premises assumed by our author with regard to the more frequent occurrence of unnatural deviations than is admitted by other authors be correct or not, the practical inference drawn from them is equally sound, and deserves especial attention.

> "It is these aberrations that emphatically declare midwifery to be a science—for it has and must have its own principles; principles that must not only be known in the abstract, but constantly employed; and it is the happy application of the fundamental rules of this science, that makes one practitioner superior to another." p. 10.

The whole of this introduction is well written, and worthy of careful perusal. Towards the close Dr. Dewees modestly acknowledges his obligations to Baudelocque, for the better part of his knowledge of midwifery. He especially recommends the study of this great practitioner's work, to all who would perfect themselves in the science; and the recommendation, we are confident, will be seconded by every one conversant with his writings.

The first, second, and third chapters, are devoted to the anatomical description of the bones of the pelvis, the head of the child, and the genital organs. These we must pass over, with the exception of the section treating of the deformities of the pelvis.

Deformities of the pelvis consist, according to our author, either in an excess of size in the diameters of this cavity, or in a defect of them. The obstacles presented by the first, are surmountable by common means. They are well known. The second is more common, and also more serious in its consequences. The more frequent causes are rachitis in infancy, aud malacosteon at a more advanced age. The effects of these diseases vary considerably, the pelvis being sometimes more diminished, at other times less. The boundary affixed to the degree of deviation requisite to render labour impracticable, is three inches in the antero-posterior diameter of the superior strait. There are, however, some remarkable cases of children having been born alive, when there have been but two inches and three quarters from the pubes to the sacrum. These are to be considered exceptions to the rule.

In fixing the above limit to three inches, Dr. Dewees expressly states, that he has availed himself of the experience of European accoucheurs, because he believes that the collected experience of American practitioners would not have been sufficient to the formation of a correct conclusion on the subject. The cause of this is a singular one, and merits attention. It is the extremely rare occurrence of deformity of the pelvis in this country. In proof of this, Dr. Dewees alleges that it has never been encountered by some practitioners of pretty extensive practice, and by himself only three times in the course of a long and very ample experience.

In the examination of the pelvis, our author does not approve of Contouli's pelvimeter, but following his great master Baudelocque, recommends the caliper and also the finger.

Chapter 2d, treats of the child's head, and details several very judicious rules for ascertaining its situation.

Chapter 3d, treats of the genital organs, and 4th, of the menses.

The menstrual fluid, is believed by our author to be a secretion, for the following reasons :

> "Independently of considerations derived from the structure and diseases of the uterus, of the menses being the result of a secretory process, we are to regard the appearances of the discharged fluid itself, as confirmatory of the suggestion. This discharge must be either a portion of the common mass of blood as it circulates in the system, or it must have undergone some change during its separation from the uterus—if the former, it should exhibit the appearances of blood detracted from any other part of the body by opening a vessel for the purpose; but this it does not do; if the latter, it is probable that it has been eliminated by that process termed secretion. This opinion is farther strengthened by the following considerations of the physical properties of the fluid itself: 1st. Its colour is between the arterial and venal blood, being less brilliant than the former, and more florid than the latter: 2d. It never separates into parts; blood drawn or evacuated from any other part of a healthy body, does separate, in a short time after, into its principal component parts: 3d. It never coagulates, though kept

> for years; while other blood, when free from disease, quickly does this when exposed to the influence of the air: 4th. Its odour is remarkably distinct from that of the circulating mass; and is less disposed to putrefaction." p. 50-1.

While on this subject, it gives us pleasure to refer our readers to the very able and ingenious views of Dr. Manley, promulgated in his essay on menstruation, which was published in our thirteenth number. They have deservedly attracted the attention of the foreign journals.

Dr. Dewees next considers the several efficient causes which have been assigned, by the ingenuity of philosophers, for this peculiar habit of the human female, viz. lunar influence, general plethora, and lastly, the topical congestion of Dr. Cullen, "by whom it was taught with all the force of eloquence, and all the charms of fancy." All these are rejected as unsatisfactory, and it is left for some future Hunter or Haller to advance a more satisfactory explanation.

We quote the following paragraph on account of the refined ingenuity of the idea it expresses.

> "It may be asked, why are the menses in the human female coloured? This may be difficult to answer satisfactorily; but we are of opinion that one of its uses is, to advertise the female when this discharge is arrested, that impregnation has taken place, and thus enable her to make the necessary arrangements for the period of becoming a mother. Had this discharge not been coloured, it might readily be mistaken for an increase of the secretion, natural to the uterus and vagina—but being coloured, this error could not well take place." p. 61.

The difficult and mysterious subject of conception next attracts our attention. Notwithstanding all the ingenuity which has been employed on this subject, from the time of Aristotle down to the present day, all that we know decidedly about it may be summed up in the words of the psalmist, that man is wonderfully made. Our author seems disposed to adopt the conjecture, that absorbents, especially intended for the purpose, convey the semen to the ovaria, admitting however, that it wants confirmation. In the present number of this Journal, our readers will find a new hypothesis advanced by Dr. Stearns, late president of the State Medical Society. It is supported by much ingenious reasoning, and deserves respectful consideration from those whose curiosity leads them to indulge in speculations of this kind.

The changes produced by conception, the formation of the membranes, the placenta, the fœtal circulation, and lastly, the changes effected in the uterus by impregnation, are next treated of, and deserve the attentive perusal of the obstetrical student. We cannot in this place necessarily do more than simply allude to them.

On the action and displacement of the uterus, our author has furnished several able and satisfactory sections. His views on these subjects have, however, been so long before the public, that it were a work of supererogation to dwell upon them here. We cannot, however, omit quoting the very explicit rules he has laid down for the treatment of retroverted uterus.

> "Having decided upon the propriety and necessity of giving aid to the suffering woman, we shall next give directions for the best mode of doing this. We must first consider what forces are operating to prevent the restoration of the fundus, before we describe how they are to be overcome; they will be found to be: 1st. A distended bladder. 2d. An impacted rectum, and, most probably, a loaded colon at its sigmoid flexure. 3d. The counteracting efforts of the woman herself. 4th. The too great bulk of the uterus.
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> "The first thing to be accomplished is, emptying the bladder by the catheter; in this, it is said, we cannot always succeed; we have never met with such a case; and Mr. Burns declares the same thing, and even goes farther—he says he does not believe it can occur—it must, therefore, be very rare. Dr. Denman has some very useful remarks upon this subject, which we would recommend to be studied—he advises the employment of the flexible male catheter, in which we heartily concur; he also cautions against any attempt to display dexterity, by the quick introduction of this instrument, and recommends the slow and cautious use of it—he also proposes pressure upon the abdomen, to promote the discharge of the urine; we may, however, add, that not only the introduction of the catheter should be slow, but the drawing off the water should also be so—we are certain we once saw serious mischief arise from inattention to this direction.

"To overcome the second difficulty, injections should be thrown up the rectum if practicable; but which, it must be confessed, is sometimes impossible—we can succeed, however, with the elastic gum catheter of a large size, when the common means might fail; the injection should consist simply of salt and water, in the proportion of a table spoonful to a pint. A few hours before we commence the operation, small and repeated doses of the sulphate of magnesia may be given, provided the stomach is not distressed by vomiting or severe nausea.

"The third difficulty which may oppose is, the violent and involuntary efforts to bear down, to which the woman is excited, by the presence of the hand within the vagina—this is decidedly the greatest trouble we meet with in ordinary cases—for we may be foiled in our attempts at reposition, though the emptying of the bladder and rectum should not have been found troublesome. To overcome this opposition, experience has repeatedly taught us the efficacy of bleeding to, or near to fainting.

"When we have determined upon the bleeding, we should be prepared beforehand, to take advantage of the deliquium, as its effects are but transitory—the bed should be prepared in such manner, as will allow the patient to lie upon her back, with the perinæum free over the edge of the bedstead, and her shoulders a little depressed—some protection should be placed between the back of the woman and edge of the bedstead, that she may receive no injury from its hardness—the parts should be well lubricated by hog's lard or oil—a chair should be placed for each foot to rest upon, and these supported by two by-standers.

"When every thing is in readiness, the arm should be tied up (the patient standing near the bed); a large orifice should be made, and blood drawn until faintness is induced—when this happens, the arm must be secured, and the woman placed as just directed; the hand, after being well lubricated, should be passed into the vagina, in a state of supination; the fingers retracted in such a manner, as to form a straight line at their extremities; they must then be gently pressed against the base as it were of the tumour that is found within the vagina, so as to move it backwards and upwards along the hollow of the sacrum, until the mass shall reach above the projection of this bone; when thus far, the hand may be withdrawn; and a pessary be introduced of a proper size: the woman must remain quietly in bed for three or four days; the urine for this period should be drawn off as may be required, and the fæces evacuated by injections.

"The last of our embarrassments arises from the size of the uterus being equal to, or greater than the opening of the superior strait; this will be confessed to be one of much moment and interest—yet, we trust, is not beyond remedy; we believe that the plan just suggested, might succeed even here; but we confess it wants the test of experience. It should upon every consideration be tried, before severer means are adopted; should it fail, we loose nothing. But suppose it fail, what is then to be done? Three modes of operating present themselves in this dilemma.

"First, to confide entirely in the resources of nature, as recommended by Dr. Merriman.

"Second, to attempt provoking of abortion by rupturing the membranes through the os tincæ.

"Third, to puncture the uterus through the rectum, as advised by Dr. Hunter, or through the vagina, as practised by M. Jourel." p. 88, 9, 90, 1.

The third mode is approved by our author.

Chapter VIII. *Of the signs of Pregnancy.* This is a delicate subject, and frequently involves important discussion in medico-legal questions. Common as pregnancy is in occurrence, it is somewhat strange that it should present no one symptom or feature by which it can be invariably recognised, to the full satisfaction of the rigid examiner. That such is the case, the highest authorities in science warrant us in asserting; and the position cannot be too strongly impressed on the mind of every physician, who is liable to be called upon in a court of justice, to deliver his opinion in cases involving the loss of property, character, and even life.

The first and most usual symptom of pregnancy, is the suppression of the menstrual discharge. A variety of other causes, as cold, chronic diseases of the viscera, or depressing affections of the mind, may also produce this effect. Our author here interposes an interesting question. If the absence of the menses be not a positive sign of pregnancy, does their presence insure an exemption from it? The opinion of Dr. Denman is well known to be in the affirmative. This writer goes so far in support of this side of the question, as to charge those who differ from him with ignorance, or what is worse, direct falsehood. There can be no doubt, however, that this eminent physician was, in the present instance, wrong, and evidently carried away by preconceived opinions. Heberden relates distinctly in his commentaries, the case of a female, "who, during four pregnancies, never ceased to have regular returns of the menstrua, quite to the time of her delivery,"* he himself refers also to several American writers, in confirmation of the simultaneous existence of menstruation with pregnancy. Dr. Dewees himself is perfectly familiar with a number of women, who habitually menstruate during pregnancy, until a certain period; after which, they cease: thus, several of them menstruate till the third month, others longer; and two until the seventh month. We think it a remarkable circumstance, that the two last mentioned are mother and daughter.

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* Heberden's Commentaries, p. 167.

The next signs of pregnancy noticed, are nausea and vomiting, enlargement of the mammæ, areolæ, the formation of milk, enlargement of the abdomen, increased size of the uterus, pouting out of the navel, spitting of frothy saliva, and salivation, any one of which or all may be present or absent during pregnancy, and are therefore not to be relied on exclusively in forming of an opinion on so delicate and important a question.

Under the head of enlargement of the abdomen, Dr. Dewees has favoured us with the following case, which will abundantly enforce the necessity of caution and minute examination.

> "This young lady's case was submitted to a medical gentleman, who, from its history, and the feel of the abdomen, pronounced it to be a case of pregnancy, and advised the sorrow-stricken mother to send her daughter immediately to the country, as the best mode of concealing her shame. Not willingly yielding to the opinion of her physician, (a young man,) and moved by the assertions of her agonized child, we were consulted. The history of the case was thus briefly given: "She commenced at between twelve and thirteen to be regular, and continued to be so until late last fall, at which time she had a very smart attack of the then prevailing epidemic; of this she was, however, relieved by the usual remedies; since that time she has never menstruated; she gradually swelled in the belly; her stomach much affected, especially in the morning; the breasts were a little enlarged, but not much."
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> "We examined the mammæ, and found them a little tumid, but without areolæ; the abdomen was much enlarged, tense, and hard, in consequence of a large tumour which was confined to the left side of this cavity, and which could be easily traced throughout its right and inferior margin, and proved (at least in our opinion) to be an enlarged spleen; no tumour was found in the pubic region, consequently the uterus was not found enlarged; the navel was sunk, and upon an attempt to pass the finger into the vagina, we found so much evidence of her continency in the resistance

offered to it, that we did not persevere, being perfectly satisfied from the condition of the parts that she was a virgin. We unhesitatingly, and with no common degree of pleasure, declared the poor child to be free from the charge so heedlessly and cruelly preferred against her." p. 107, 8.

One of the severest symptoms to which pregnant females are liable, is the morning sickness and vomiting. There is not much danger attending this affection in general, but cases are not wanting in which it has proceeded to such lengths, as to have baffled all the skill of the medical attendant. Mr. Vaughan's case related in the Medical Memoirs, is probably known to our readers, in which it became necessary to nourish the patient by clysters and the external application of milk. Our author's treatment is so judicious, that we shall be excused if we give a short account of it. In slight cases a glass of warm water or camomile tea, taken as soon as nausea is felt, will shorten the sickness by inducing vomiting. If acidity prevail at the time, soda water is very proper. When the bowels are torpid, calcined magnesia is the best laxative. Should the nausea and vomiting continue through the day, so that the food is thrown up, the patient should be confined to a table-spoonful of milk every fifteen or twenty minutes, and not allowed to take any thing else. Lime water may be occasionally added. When alkaline remedies fail in relieving the acidity, as they often do, Dr. Dewees has recourse to acids themselves, both the vegetable and the mineral. The vegetable are however the best. Lemon juice and water has frequently produced the most decided benefit. In cases of plethora, bleeding is necessary, especially if the patient complain of head-ache, and when there is pain or burning in the epigastric region, leeches have been found useful. The spirit of turpentine is finally recommended in twenty drop doses, three or four times a day, mixed in cold sweetened water. The diet should consist of such articles as the patients' experience proves to be best suited to their stomachs. Dr. Dewees mentions the case of a female who could retain nothing except Indian meal cake, baked pretty hard upon a board. This she was allowed to live upon for weeks, and she did it with advantage.

In heart-burn the following pills are recommended.

℞. Gum. aloes suc. ℥ss.
Pulv. Rhei. ℥i.
Ol. Caryoph. gutt. iv.
Sapo. Venet. gr. viii.
Syr. Rhæi. q. s.
M. f. pil. xxx.

One of these is to be taken every night, or every other night, as may be eligible.

Leucorrhœa.—Dr. Dewees considers it highly improper to use active remedies for this affection, when it is an attendant on pregnancy; until this period has elapsed, he therefore uses a temporising plan consisting in ablutions of luke warm water three or four times a day, and mild astringent injections.

When it is idiopathic and independent of pregnancy, a different plan is necessary for its management. It is divided by our author into three stages, each of which requires a modification in the treatment. In the first or most simple form, the matter is glairy and transparent, accumulating in the vagina, and then discharged by a sudden effort of the patient, or by its own weight. This is never acrid, unless cleanliness is neglected. The treatment consists of frequent ablutions with warm water, purging when the patient is plethoric, and the tincture of cantharides, in the dose of thirty drops three times a day. This dose is to be increased five drops every third day, until strangury is produced, unless the disease is previously arrested. As soon as a change is induced in the discharge, astringent injections of the acetate of zinc, in the proportion of five or six grains to the ounce of water, or of the sulphate of copper, half a drachm to eight ounces of water are to be used. The tincture of cantharides given as above, seldom fails in effecting a cure. The dose has been increased by Dr. Dewees to two hundred drops three times a day.

In the *second* stage the discharge has a white or purulent appearance, and is more abundant than in the first stage; it is also more acrid. Pain in the back, hips, and pubic region accompanies this stage, the patient's complexion is sallow, and when the discharge is excessive, nervous symptoms arise, and are very troublesome to manage. The system generally sympathises with the part affected, and the pulse is very hard and irritated. The treatment is as before, with restriction to vegetable diet, and bleeding pro re nata. When the pulse is in a proper state, cantharides is also administered.

In the third stage, all the symptoms are aggravated. The discharge is green, frequently tinged with blood, and the symptoms of general irritation are greater than before. Bleeding is more often required in this stage, and more strict attention to diet becomes necessary.

Deranged menstruation is next considered under all its different forms, and with our author's usual minuteness and judgment.

We then come to the most interesting portion of the volume before us, the consideration of labour. In the management of this part of his subject, Dr. Dewees is undoubtedly superior to any author who has preceded him, not only for the extensive view he has taken of labour in general, but for the happy and minute directions with which he furnishes the young accoucheur to enable him to act with decision, propriety, and skill, when first placed in that most terrible of all medical ordeals, the bed-side of a lying-in woman. Those only who have experienced the anxiety and misgivings of inexperience when first exposed to an active discharge of its duties, and the ready application of its previously acquired knowledge, can sympathize with the feelings of young men when called to a first case in midwifery, and they will best appreciate the value of the assistance which Dr. Dewees has here rendered. As a specimen of his minuteness, we shall quote the following directions, selected from many others.

"To conduct a labour with safety, the practitioner should be well acquainted with its phenomena: the order or succession of them; where certain of them may be wanting or are in excess; the relative or positive importance of each; the force or effect of each pain; the necessity of preserving or of wasting the waters; the resistance the os uteri or external parts may offer; the situation of the former as regards the presenting part; the certainty of the presentation, both generically and specifically; the mode of rectifying any error of presentation in proper time; the capability of doing this with the greatest advantage to the patient and to the infant; and "though last not least" in importance, is the pursuing a firm, candid, and feeling conduct throughout the whole scene, that he may not be betrayed into indiscretion, by the overweening anxiety of the friends of the patient; that he may not lose the important moment to act, from an apprehension that blame may attach upon the disclosure of its necessity; and that the poor suffering woman may derive every advantage his kindness and sympathy may afford."

"1st. Let all communications to the patient of a delicate nature, be conducted by a third person; the nurse, when present, should always be that person; in her absence an elderly friend.

"2d. Endeavour, by a general and well chosen conversation, to divert the patient's mind as much as possible from the purpose of your visit, when your services are not immediately required.

"3d. When your presence is not absolutely necessary in the sick room, be as little in it as will be consistent with your duty to the patient—by this you remove restraint, and apparently abridge the period of your watching.

"4th. Should the situation of your patient in your opinion require to be ascertained, let the proposition be made by a third person, as the nurse, and urge, in defence of the request, all the circumstances which led you to believe it would be important, as the length of time she has been in pain; the force and frequency of her pains; the evacuation of the waters, if it has taken place; and, above all, to ascertain the progress of the labour, and whether the presentation be a proper one.

5th. If, after you have made your examination, you should be importuned for your opinion of the nature of the presentation and duration of the labour, do not commit yourself by any positive declaration, unless you are certain of the first, and pretty sure as to the latter.

"6th. Before you proceed to the examination, let your patient be placed with the most scrupulous regard to delicacy, as the slightest exposure is never necessary; let the light be excluded from the room by shutting it out if in the day, and by the concealment of it at night." p. 190, 1.

For the relief of the after pains, which are frequently severe, our author uses camphor in the following form.

℞. Gum. Camph. ʒij.
Sp. vin. rect. q. s. ft. pulv.—Add

Pulv. Gum Arab. ʒiij.
Sacch. alb. q. s.
Aq. font. ℥vi.—M.

Of this a table-spoonful is to be given every hour or two.

In the classification of labours, Dr. Dewees has adopted the arrangement proposed by Baudelocque, with the following acknowledgment, which we quote as a favourable specimen of scientific candour.

> "As regards ourselves, we are free to confess, for the little we know upon the subject of midwifery, we are principally indebted to him; for to him do we owe the principles which rendered our experience of any profit to us—and could we induce every one who engages in the practice of midwifery to carefully study this great man's works, we should benefit society by rendering them so much the more competent to fulfil the duties they have undertaken to discharge. Entertaining such sentiments of the author we intend chiefly to follow, we shall not think it necessary to apologize for our choice." p. 240, 1.

The second part treats of labours that are preternatural, but which the hand alone is sufficient to terminate.

Causes of preternatural labours.—Among these are enumerated 1st, flooding; 2d, convulsions; 3d, syncope; 4th, Hernia; 5th, obliquity of the uterus; 6th, partial contractions of this organ; 7th, compound pregnancy; 8th, descent of the cord; 9th, too short a cord; 10th, bad position of the head; 11th, exhaustion; 12th, hæmorrhages from the lungs and other organs. Each of these is discussed at large, and definite rules of treatment laid down for overcoming the difficulties they occasion. This portion of the volume cannot be too minutely studied. It is pregnant with practical information.

Another instance of our author's minuteness occurs in his directions for conducting a preternatural labour. No circumstance is omitted which can occur to embarrass the practitioner, and he is taught to the most trifling point how to manage, in order to do justice to his patient, and secure his own approbation. Our limits, of course, prevent our entering into this part of the book.

We have already extended our notice of this excellent system so far, that we find ourselves compelled to hasten to a close. We shall therefore make only one more extract.

After treating fully of the use of the forceps, and justly condemning the doubts expressed by Dr. Denman, whether the art of midwifery has been benefitted or injured by the introduction of instruments into its practice, Dr. Dewees in the following comprehensive section, recapitulates the points to be insisted on in the use of the instrument.

"As we have dwelt upon the use of the forceps longer than we at first anticipated, though not longer than the subject required or merited, we shall sum up in a few words the principal points intended to be insisted on or illustrated: 1st, that the long French forceps are the preferable, for even the unskilful; 2d, the best position for the woman is the same as that we have recommended for turning; 3d, the bladder and rectum are to be emptied before the forceps are introduced; the former by the catheter, when the woman cannot command the discharge; and the latter by an injection, if it has not been done spontaneously a short time before; 4th, the patient and friends are always to be apprised of the intention before the operation is resorted to; 5th, the vagina, external parts, and the instruments to be coated by fresh hog's lard or soft pomatum, and the latter warmed; 6th, the forceps are never to be employed before the os uteri and external parts are relaxed, and the membranes ruptured; 7th, this condition to be promoted as quickly as possible by the best adapted means; 8th, should the uterus be in proper condition for the operation, and the membranes at the same time entire, we must rupture them that the application of the forceps need not be delayed when the case requires immediate interference; 9th, when the circumstances of the case require the use of these instruments, the application should not be too long delayed, from an imaginary fear that the woman might suffer from their use, or from an ill-grounded hope that the a woman may deliver herself—we should, therefore, not permit her to be exhausted, or the child to perish, because feeble or inefficient pains attend, or because the head of the child has not been six hours in the passage; 10th, the blades of the forceps are to be always so introduced as to be applied to the sides of the head, that is, over the ears of the child—when necessity (which is very rare) obliges us to depart from this rule, it is but an exception to the rule; 11th, they must be applied, so that their upper or concave edges will come under the arch of the pubes, at the last period of labour; 12th, should the handles of the instruments not join with ease, we may be certain they are ill applied; the cause of their not locking must be ascertatned, but they are never to be joined by force; 13th, that the head will not permit, with safety to the child, but a moderate approximation of its sides; therefore, when compression is carried beyond this point, the destruction of the child is sure to follow; 14th, with a view to lessen all unnecessary and long continued pressure upon the child's head, the handles of the forceps should not be tied; but after each tractive effort, they should be permitted to expand themselves by ceasing to press them with the hands; 15th, each traction should be made from blade to blade, that each may act as a lever upon the head; 16th, the extent of the motion of the handles for this last purpose should be regulated by the distance from the external parts; the less the head is advanced, the more circumscribed should be the motion, and the reverse—this motion is at first nearly horizontal; 27th, the external extremities of the instruments must be raised towards the abdomen of the mother in proportion as the head advances through the external parts; 18th, should pains continue until the head has nearly passed through the external parts, the forceps may be removed; but if none attend, the delivery must be completed by the forceps." p. 314.

The remaining chapters are devoted to uterine hæmorrhage, puerperal convulsions, the placenta, inversion and rupture of the uterus, &c.; the greater part of which have been before the public several years, and passed through repeated republications. Their merit has been universally admitted, and it were therefore superfluous to dwell on them at this late day.

In the review we have now presented to our readers, it will have been perceived that we have somewhat departed from our customary rule of commenting on the passages we have noticed. The nature of the subject in part rendered this unnecessary, but we were also influenced by another reason, which was a desire to place the views of our author in full relief, unobstructed by any interposing obstacles, which discussion on a variety of the points might have freely offered. His extensive experience, his well merited popularity as an obstetrical writer, and the accuracy of his general views, all concurred in exacting this tribute at our hands, and we have freely paid it.

It will not be regarded as a detraction from the high praise we have bestowed on this work, if we suggest to Dr. Dewees a careful revisal of the composition of this volume, before he allows it to appear in a second edition. There are a great number of inaccuracies in the style and language, which should have been avoided in a book calculated for general use. Of these we might cite several instances, but we do not think it necessary to do so in this place. We might also object to the constant use of the pronoun we, instead of I: in some instances it even appears ludicrous, and is at all times offensive to good taste.

ART. II. MEDICAL FACTS *and* INQUIRIES, *respecting the causes, nature, prevention, and cure of* FEVER; *more expressly in relation to the endemic fevers of summer and autumn in the Southern States. Together with a history of the Bilious Remitting Fever of Alabama, as it appeared in Cahawba and its vicinity in the summers and autumns of* 1821 *and* 1822. By JABEZ W. HUESTIS, M. D. Author of physical observations, and medical tracts and researches on the topography and diseases of Louisiana. Cahawba, 1825. 8vo. pp. 442.

DR. HUESTIS was first introduced to the notice of the public by his observations on the topography and diseases of Louisiana, published in 1817. That work displayed no ordinary share of learning and ability, and contained much valuable and interesting information respecting a wide tract of country, then newly acquired by our government, and little known. The chapters describing the scurvy and dysentery which desolated that part of our army which was stationed at Terre-aux-Bœufs, were more especially creditable to the author, and will even now prove important guides to those who may be entrusted with the lives of troops similarly situated. It is also worthy of observation, that this volume was composed amidst the active employments of military duty. "The substance of the following observations," (says Dr. H. in his preliminary remarks) "was drawn up during my residence in Louisiana, amidst the professional avocations of a military life. Having a field for research, and medical information, I did not suffer the opportunity to escape without improvement. I saw the complicated character of diseases, considered their origin, and marked their progress. I committed my observations to paper; and what I saw and observed, I endeavoured to understand. The more I saw, the more I was convinced of the natural affinity and close analogy of the various modifications of those diseases which fell under my observation. From researches into their causes, and attention to their phenomena, I endeavoured to ascertain their nature. Experience, reading, and reflection at length afforded a satisfactory clue to my inquiries, and enabled me to trace the simple operations of nature, in bringing about the complicated appearances of effects."—*Observations &c. on Louisiana*, p. 6.

From this extract it will be seen that Dr. Huestis was actuated by a highly laudable zeal to extend the boundaries of medical knowledge, and turn to profit the experience which an active campaign, and the numerous vicissitudes of military life so richly furnished. It was this same zeal in the British and French army and navy surgeons, which enabled them to add so much lustre to the power and reputation of their respective countries, and to share the laurels with which their more active and less humanely employed military brethren were so deservedly crowned. Their contributions to the stock of medical experience have tended in no immaterial degree, to give that exalted character of improvement which the medicine of the present age enjoys. To them are we indebted for the development of most of those resources by which we are able to encounter the most afflictive diseases, and also for the dissipation of many of those errors and prejudices which had been handed down through the schools as an unalienable inheritance to the whole profession. If other claims were wanting, the powerful aid they have lent in overturning the monstrous doctrine of the contagion of yellow fever, is sufficient to ensure them the lasting gratitude of this and every succeeding generation. We hope these few remarks will not be thrown away. The opportunities which our naval service more especially affords, should be improved by our medical officers; and if these pages meet the eyes of any one of these, we shall deem it no slight evidence of the value of our labours, if we should be the means of inducing them to emulate the examples to which we have just alluded.

The present work treats in the first place of fever in the general, and secondly of that form which annually visits the state of Alabama in particular.

In the first chapter, the author treats of the causes of summer and autumnal fevers in hot and tropical countries. He enters into a chemical and philosophical investigation of the preliminary circumstances of endemic fevers, also into a chemical analysis of the processes of putrefaction and decomposition, of heat and moisture, and of miasmatic exhalations. Much of what is contained in this chapter is of course already well known. It is however interspersed with many novel and sensible suggestions of the author.

In the second chapter, the nature, origin, and contagion of endemic fevers are considered, and the doctrine of the contagion, importation, and exotic origin of yellow fever is discussed at large. We need scarcely say that Dr. Huestis scouts at the idea of contagion.

Chapter third is devoted to the pre-disposing and exciting causes of endemic fever. The fourth to the primary mode in which infection operates on the system in the production of disease. In the fifth chapter the author enters into an inquiry as to the seat of fever, and supports the idea that the immediate cause of fever exists in the circulating fluids.

The sixth and seventh chapters are on the period of infection, and the theory of fermentation and putrefaction in explanation of the phenomena of fevers. Chapter eighth, ninth, tenth, and eleventh treat of the proximate cause, the symptoms, and prognosis of fevers. The twelfth gives us the appearances on dissection; the thirteenth and fourteenth treat of the prevention and cure of fever. The book then closes with accounts of the bilious remitting fever of Alabama, as it appeared in Cahawba and its vicinity in the summer and autumn of 1821 and 1822.

This compressed view of the contents of the book now before us, will suffice to show that the author has entered into the discussion of some of the most important and difficult questions which have ever been agitated in medical philosophy. From the time that Hippocrates wrote his book on the air, down to the present day, the history and causes of epidemics have never failed to attract the attention, stimulate the industry, and elicit the ingenuity, not of physicians only, but of all the most enlightened men of every age and country. And yet if we compare the amount of knowledge which has been acquired, with the extent of labour which has been bestowed, we shall find little cause for exultation, or even to hope for a speedy uplifting of the veil which has so long hid from our view the origin and progress of epidemic diseases. Much has, however, been done, and every fact that is added to the store already accumulated, and every new speculation or hypothesis, however wide from the truth it may ultimately be made to appear, that is advanced with any degree of plausibility in its favour, and defended with ingenuity of argument, should be regarded with attention, as they all tend to promote inquiry, and increase the facilities for future investigation.

In the management of his subjects, Dr. Huestis has shown himself an attentive observer of the phenomena of nature, and a patient and careful student of the observations of other writers, both ancient and modern. An ingenious and cautious reasoner, he is however led away occasionally by specious appearances, and that love of simplification which confounds things essentially or specifically distinct on account of some general similitude. This error is more especially perceptible in the author's views of the identity of the ordinary bilious with yellow fever. We are aware that he is far from being singular in this opinion. Some of the brightest names which adorn our medical literature are to be found enlisted on this side of the question. And the fact that the contagionists have espoused the contrary doctrine, and that they have, for very obvious and interested purposes, made no small efforts to associate it with the great question of contagion itself, has lent no little force to the spirit with which the identity of the two diseases has been maintained by many of the non-contagionists. It is not the contagionists alone, however, who contend for a specific difference between bilious remittent and yellow fever. Some of the earliest, most zealous, and most powerful opposers of contagion have supported the same opinion, and to our apprehensions with indisputable power of fact and argument. That this may not seem to rest on our mere assertion, we shall, in the first place, quote two or three writers who have treated on the subject, and whose authority will not be disputed, and, in the second place, mention those points of distinction, which the recorded experience of others and our own in both diseases have enabled us to trace with marked accuracy.

One of the most enlightened and forcible writers on the yellow fever, and one to whom subsequent authors have been much indebted for their knowledge of the character and method of treating this afflicting disease, is Moseley. Intimately acquainted with the yellow fever of the West Indies, and possessing a powerful and discriminating mind, he was early led to reject the belief in contagion which had been before his time so prevalent, and also to draw the decided line of demarcation between the ordinary remittent of all hot countries and climates, and the yellow fever. Thus in one place he states, " the *bilious remittent fever* is a common disease, with which the *endemial inflammatory fever*, (called the *yellow fever*,) has been so much confounded by writers."* In another, speaking of two unfortunate physicians, Williams and Bennet, who terminated their disputes on yellow fever by killing each other in a duel, he says " both adopted the opinion that the yellow fever was a bilious fever, and gave it that appellation, and though Williams's indications of cure were rational, he was not able to distinguish it from diseases *really* bilious. This want of discrimination," Moseley adds, " had always existed in the West Indies, and the consequence was, that cardiacs, and refrigerants, evacuants and bark, emetics and bleeding, *frequently* and *fatally* usurped the place of each other."[*] Again: in defending his opinion that yellow fever is a species of the Καυσος of Hippocrates, Aretæus, and Galen, and he does it with no small degree of plausibility, he says, " it is *totally* different from the remittent bilious fever to which all habits of body are subject in hot climates, particularly after rains, and in the fall of the year."[†] On the symptoms and treatment, this same author observes, that " they who have mistaken the bilious remittent, for the causus, consequently speak of remissions, which do not happen in this disease,"[‡] and " that emetic tartar, however useful it may often be in bilious diseases, will be fatal in this."[§]

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* Moseley. A Treatise on Tropical Diseases, &c. fourth edition. p. 203.

In opposition to the author, whose opinions we have now cited, Hillary may, by some, be referred to. This author calls yellow fever a putrid bilious fever, and like Dr. Huestis, he thinks that " the bile has a great, if not the greatest share in producing this fever."[||] Before we give any weight to this assertion of Hillary, we should remember that he was warped in all his views of disease by the exploded doctrines of " first and second concoctions," " the bile and all the humours of the body being inquinated with a putrid bilious acrimony," and this to so great an extent, that he considered the black vomit merely *putrid bile*. Another circumstance concurred to lead Hillary astray. This was the belief at that time prevalent in the West Indies, that the liver was necessarily and primarily affected in all the diseases of warm climates. Bile was regarded as the prominent cause of fever, and the sickness of the stomach, and dark vomitings were accounted for by the affection of the liver, while the more prominent gastric affection was overlooked. What confirms us in the opinion that Hillary was in this instance deceived, is the fact that in his treatment he denounces emetics which had been before recommended, thus showing his practical sagacity, notwithstanding his attachment to scholastic dogmas. That Hillary should have erred in this respect, may be regretted, but can scarcely be matter of surprise. He was one of the pioneers in the discussions which have since so multitudinously increased respecting yellow fever. But that Dr. Huestis, with his learning and judgment, should at the present day assert, "that a redundancy of bile is one of the most inseparable symptoms of yellow fever, and that therefore a name expressive of this circumstance must be considered more appropriate than any other,"* strikes us with perfect amazement. We cannot in this place contend the point at large, but shall go on and mention another highly respectable author in favour of the opposite doctrine.

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[*] Moseley, p. 138. [†] p. 411. [‡] p. 467. [§] p. 459.

[||] Rush's Hillary, p. 112.

We allude to Dr. Robert Jackson, so well known by his masterly treatises on the fevers of warm climates, and latterly by his full and accurate description of the yellow fever of Spain. This justly celebrated physician offers to the world the interesting spectacle of a man of science, who has been engaged, for more than half a century, in the investigation of disease, and who, at the advanced age of seventy-five, promptly quitted the sweets of retirement, and fearlessly undertook a distant voyage to the sources of a raging pestilence, in the hope of ascertaining its character, and shedding additional light on the long agitated question of contagion. It is no small confirmation of the truth of the non-contagious doctrines, that the enlarged and prolonged experience of a Jackson is strongly enlisted in their favour, and it will not be denied that his opinion with respect to the specific difference between yellow and bilious fevers is equally entitled to our respect. He expressly discriminates the yellow fever from the *endemic remitting fever*, inasmuch "as it has no remissions, nor exacerbations, does not attack the same person twice,* unless accidentally on his return from a colder region; attacks lately arrived Europeans, and not those who are climatized or natives; while the remittent does not cease to attack those who have resided long in warm climates."†

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* Page 105.

In our own country, two of the latest writers on epidemics, Dr. Chapman of Philadelphia, and Dr. Joseph M. Smith of this city, have both espoused the opinion that there is a specific difference between the two diseases.

It is an error therefore to suppose, that it is to contagionists alone that the belief in a specific difference between bilious and yellow fever is confined. Having satisfactorily shown this, we shall now proceed to offer a few reasons, which induce us, independently of the opinion of others, to maintain the same doctrine. This we shall do under four distinct heads, and we must, for obvious reasons, be brief and summary in our remarks under each.

1. The yellow fever differs from the bilious remittent in its *history*. The former prevails in places near the sea-coast only, and has never yet appeared farther north than 44° N. The bilious fever, on the contrary, appears equally in the interior of countries, and on the coast, and is constantly occurring in places situated as high as 55° N. Nor is the appearance of yellow fever confined to the sea-coast in temperate latitudes only; this rule holds equally good in the tropics themselves—in the West Indies, and on the continent of South America.

The yellow fever occurs at indefinite periods, marked frequently by no traceable resemblance in their general character as to moisture and heat; the bilious fever always appears where heat and moisture, and miasmatic exhalations concur. Thus the yellow fever did not prevail in New-York or Philadelphia from 1760 to 1793, although in the meantime the bilious fever was repeatedly observed as often as its appropriate causes had an opportunity of action.

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* It has often amused us to observe with what conceited complaisance certain writers in this country have pretended to the discovery that yellow fever attacks once only. These sciolists are not even aware that this position is true under certain restrictions only! To these men we say, "drink deep, or taste not."

† Jackson on fevers, p. 163.

The yellow fever in the tropics does not attack natives or seasoned foreigners, but is confined to strangers within a year or eighteen months after their arrival. Hence it may be laid down as a general position, that yellow fever does not, under the same circumstances, attack the same individual twice. The exceptions to the rule are furnished by those, who, after having lived in a warm climate, visit a cold region, and then return again to the tropics. Under this exception are included the permanent residents of temperate climates, whose systems assume a new pre-disposition for the disease under the agency of the winter's cold.

The bilious fever, on the contrary, attacks the natives and seasoned inhabitants, and one attack, so far from imparting an exemption from future attacks, rather pre-disposes to them. This observation applies to temperate, no less than tropical countries.

2. These fevers differ in their *causes*. It is scarcely necessary to say more under this head than what will not be denied, that while no one disputes the agency of moisture, heat, and malaria in the production of bilious fever, the causes of yellow fever are still matter of dispute, not between contagionists and non-contagionists only, but among these respective parties themselves. The truth is, that the causes of yellow fever are as yet hidden in obscurity. Some of the causes of bilious fever appear indeed accessary to the production of yellow fever, but that there must be others entirely distinct is abundantly proved by the fact that they are not alone sufficient to its production, else why are these fevers not simultaneous in their occurrence?

If the causes differed merely in grade, is it not a singular circumstance that the lesser grade shall continue to produce its effects on acclimated individuals, in the tropics for instance, while a more powerful and concentrated grade shall be inert; that is, the same cause in less quantity shall continue to produce bilious fever, perhaps annually, while in greater quantity, it cannot act so as to produce yellow fever?

3. These fevers differ in their *symptoms*.

The yellow fever consists of one paroxysm of fever only. This is followed by a total cessation of febrile symptoms, not a remission, and this again by a state of collapse; no distinct exacerbation ever re-appearing. Lest we should be supposed to be unsupported in this statement, we refer to the descriptions of yellow fever by Lining, Moseley, M'Arthur, &c., as constituting the disease truly called yellow fever.

Valuable as the New-York Medical Repository undoubtedly is in other respects, it is calculated to diffuse much error with respect to the true character of yellow fever, there being multiplied instances of ordinary remittent fever described in it, under the appellation of yellow fever. A careful analysis will expose the error in almost every instance.

The yellow fever most usually runs its course in a short time, say from three to five, or to seven days.

The bilious fever generally continues from nine to twenty-one days.

The stomach is always and essentially affected in yellow fever, as is evinced by the burning heat about the præcordia; the pain at the pit of the stomach, the vomiting of matter not bilious, but evidently a secretion from the stomach itself, or whether a secretion or not, proceeding from this organ alone.

In bilious fever the stomach may indeed be affected, but it is in a milder degree, and this organ cannot be considered the seat and throne of the disease.

The pulse and temperature in yellow fever are frequently natural; in bilious fever they are never so. The appearance of the eyes is very different in the two diseases, as is that of the suffused skin.

The muscular system always suffers under great debility as bilious fever advances, while the arterial system is more and more excited. In yellow fever, on the contrary, the muscular strength is retained to the very hour and moment of death.

The appearances on dissection differ also very materially in the two diseases. To sum up all the points of difference will scarcely be expected of us in this place. It is enough to mention the different conditions in which the stomach is found after death in the two diseases.

4. The *treatment* required in the two diseases differs essentially. Bleeding, emetics, cathartics, &c., are obviously indicated in bilious fever, and if properly directed, seldom fail to produce their intended effects, and relieve the patient. In yellow fever, it is still matter of dispute what treatment is most proper, and of the measures proper for bilious fever, some are improper in yellow fever, and others seldom produce any effect at all. Thus bleeding is still considered a doubtful remedy in yellow fever, and emetics, which are indispensible in bilious fevers, are positively contraindicated.

But it is unnecessary to extend this topic farther. We have advanced enough to show that the lines of distinction between the two diseases are pretty well defined, and we have devoted the more space to it in this article, because the whole of Dr. Huestis's work is tinged with what we consider an important error, which affects not mere theory, but is actually fraught with danger in practice.

Chapter V. *Inquiry into the seat of fever.* Our author undertakes to adduce facts in support of the opinion, that the immediate cause of fever exists in the circulating fluids. We cannot flatter him that his attempt has been at all successful. The facts brought forward go indeed to prove that the fluids can be affected by morbid poisons, and as far as this general fact bears on the subject in point, so far is it rendered probable that in fever the fluids may be affected. No immediate proofs are however offered that they are so, nor do we see any force in the argument, that if the brain and nerves are first affected, febrile commotion would not be communicated to the heart and arteries. This translation of action appears to us as possible, nay more probable, in the case of fevers, than the converse.

Chapter VI. *Fermentation and putrefaction.* Instead of any abstract of our own, we shall let the author explain his own views on these interesting subjects, observing by the way that they are exceedingly judicious and forcible.

"In scurvy, which has been called a putrid disease, so far are the fluids from being in a state of putridity, that from the experiments of Dr. Lind, it appears that blood drawn from scorbutic patients corrupts no sooner than the blood of healthy persons; and that flesh steeped in the serum of similar blood, continued sweet and free from taint, as long as in the serum of persons in health. Besides, to suppose any degree of putrefaction during the existence of animal life, is to presume a condition incompatible with living organized matter; such a condition would put a period to our hopes, and render the efforts of the physician unavailing; for when once putrefaction has taken place, the restoration of health is no longer within the reclaiming power of medicine; the animal substance is lifeless and disorganized, and mixes with its kindred elements."

"The offensive odour of the body, and the speedy putrefaction after death, have been adduced as arguments in favour of a state of putrescency in malignant diseases: but, as I have shown in my treatise on scurvy, the first affords no argument to the advocates of this opinion, as proving nothing more than that the excretions are in a morbid state; the same thing is observable in most fevers, and is particularly striking in persons labouring under salivation. But in all these instances the odour is different from that of putrafaction."

"Nor does the body putrefy sooner after death from typhus, than it does in other instances, where the vital principle is equally exhausted. It was observed, indeed, by Lind junior, Hamilton and Moore, that putrefaction proceeds more slowly in the bodies of typhus patients than in others. Whatever exhausts the vital principle has a tendency to accelerate putrefaction. It is from the exhaustion of this principle, and not from any putrid ferment present in the blood or any other part of the body that putrefaction is accelerated after death. It is from this cause, and not from the presence of any putrid ferment, that animals exhausted in the chase soon become putrid after death; the same things take place in those killed by lightning; which occasions the total exhaustion of vitality in every part of the system; and as soon as vitality is destroyed, the process of putrefaction commences. It is from the deleterious property of carbonic acid gas, that those who die of asphyxia from sleeping in a close stove room, soon putrefy and undergo rapid decomposition."

"As the febrile poison is immediately applied to the vascular system of the circulating fluids, it is not surprising that they should more especially suffer, or lose their tone, together with their power and energy of action. It is upon the healthy condition of the blood, that the health and soundness of every part of the system depends. In proportion as the cause of fever is violent and powerful, in the same degree is the vitality of the body more rapidly impaired and exhausted; and in proportion to the exhaustion of the vital principle is the tendency to putrefaction. The flesh of animals that are killed in the ordinary mode, retains a considerable portion of the *vis insita*, or inherent principle of vitality, even after the body is dressed and dissected; it is this remains of vitality that preserves it sweet and untainted; as soon as this is extinct, it begins to putrefy and becomes offensive. The flesh of animals exhausted in the chase or by baiting, has lost a considerable portion of the vital principle, from the violence of the exercise, previous to their being killed; hence the flesh is soft and tender, and runs speedily into putrefaction: the same thing often takes place in yellow fever, from the almost total extinction of the vital principle before the patient has ceased to breathe.

"From all which it would appear that the doctrine of a putrid tendency in the animal body, receives no countenance and support from any state and condition of the bile. Since putrefaction is incompatible with life, is it not absurd and unphilosphical to talk of a tendency to an event which, in the nature of things, never did nor ever can happen in the living body? Was ever life destroyed by a tendency to putrefaction? We are told, moreover, that the fluids of old persons are more disposed to putrefy than those of the young; but more accurate observation informs us, that the flesh of young animals is somewhat more prone to putridity than that of old animals: and it is important to remember that an acrimony of the fluids is very different from a state of putrescency. That the fluids and excretions of the body are more acrimonious in the aged than in young persons, is a physiological truth, confirmed and proved by general observation: such an acrimony however, has no connexion with, or dependence upon, any putridity or putrid tendency of the system. This subject may, probably, be correctly illustrated, by saying, that the fluids and solids of old persons are more highly animalized than those of the young; hence their acrimony and disagreeable odour; in the same way as takes place in carnivorous animals, whose bodies and fluids, from the exclusive use of animal food, acquire an acrimony and rancidity, similar to that which naturally occurs in advanced life in the human constitution. Hence it probably was, that the flesh of all quadrupeds except those of the ruminating kind, which live exclusively upon vegetable food, was prohibited to the Jews by the Levitical law of the Old Testament: for, inasmuch as the flesh of these beasts is already too highly animalized, the use of it would produce a hurtful excess of this disposition in the human system.

"Life is frequently destroyed by fever, and, as before remarked, it may be said that every thing that has a tendency to produce death, has also a tendency, in one sense, to produce putrefaction; for death is the commencement of this process; and whether life has been terminated by a fever, the Samiel blast, a fit of apoplexy, or a fracture of the head, there is an equal tendency to putrefaction; but to say that death is produced by a putrescency of the fluids, is anticipating a change compatible only with death itself." p. 197, 8, 9, 200. 202.

Chapter VIII. *Proximate cause of fever.* Were we inclined to enter into a prolonged discussion, we should have ample materials presented to us in this chapter. Our limits will not permit us at present, to do more than simply to allude to one or two points, which we deem exceptionable. In the first place, we should object to the very term *proximate cause*, as unmeaning, and one which ought long since to have been struck from medical nomenclature. In the second place, we should object to the doctrine, that the essence of fever consists in a vitiation of the fluids, and that the solids, if at all affected, are only so secondarily. Just the converse of this should we take to be the fact. We are willing to admit, at the same time, that Dr. Huestis has defended his theory with much ingenuity of argument and appropriate illustration, in proof of which we shall make the following extract, leaving our readers to judge of its force for themselves.

"It would appear from the consideration of what has already been advanced, that by the operation of the remote causes of fever, a change in the condition of the fluids of the body is effected, and to this change from a healthy to a morbid state, the various symptoms and phenomena of fever are to be ascribed. I am at the same time, however, fully aware that there are many symptoms of fever that cannot be explained without a reference to the brain and nerves; such as pains, spasms, delirium and convulsions: but it is well known that these symptoms may all be produced by a primary operation on the sanguiferous system. We can hardly suppose that an organ of such a delicate structure as the brain, should not feel the effects of any vitiated fluid circulating with increased violence through its substance, rapidly depriving it of its accustomed nourishment and health, and depositing poison instead of a healthy secretion. And we accordingly find that all extraneous and poisonous substances, when injected into, or taken up by the blood-vessels, produce similar effects. Thus the retention of excrementitious matters in cases of ischuria, has produced every symptom of the most malignant fever, and after death, urine has been found extravasated into the ventricles of the brain. M. Delile and M. Magendie of Paris, have demonstrated the power which poisons possess in affecting the nervous system, when admitted into the blood-vessels; and have shown that their operation can only be explained upon the principle of their being received into the general circulation, and through this medium acting upon the nervous system. This was illustrated by the following experiments: The thigh of a dog was amputated with the exception of the trunks of the crural vein and artery; the thigh was then pierced with a pointed piece of wood dipped in the upas; in another, a few drops of the upas were enclosed between ligatures, in a section of the intestines divided from the mesentery, and having no other connexion with it, than by a vein and artery. In both cases the poison was carried from the insulated parts into the general circulation by the vessels which remained, and the animals died of tetanus, in the same way, though the effect was not so sudden, as when the poison was applied to the spinal marrow cut transversely. Experiments to the same purpose have been made by Dr. Wilson Philip, and others.

"The coma, stupor, and oppression in fever, may be ascribed partly to the direct influence of the morbid condition of the blood itself upon the brain, and partly to its diminished state, by which serum is effused into the ventricles, producing the symptoms of compression.

"Even from the imperfect knowledge which we possess of the animal economy, we have every reason for concluding that the immediate cause of fever exists in the circulating fluids. We know from extensive experience that the nervous system may be violently affected without disordering the functions of the heart and arteries: and independent of experience in disorders, we are led to the same conclusion by physiological knowledge, from which it appears that the heart and arteries are not influenced by causes acting on that portion of the nervous system connected with the voluntary functions. These sympathies, however, are not reciprocal; for universal experience teaches us that in all diseases of the sanguiferous system, the brain and nerves are more or less affected. We see this in the inoculated small pox, in that form of fever produced by the retention of urine, in cases where poison has been injected into the blood-vessels, and in fevers generally." p. 219, 20, 1.

The chapters devoted to the symptoms, prevention, and cure of fevers, display a wide extent of research, mature reflection, well-digested experience, and a safe and judicious discrimination in practice. On all these subjects the author is so full, that it would be doing him injustice to attempt an abstract of them. They merit perusal, and will reward the reader with much valuable practical information.

In the descriptions of the bilious remitting fevers of Cahawba, Dr. H. has entered into a practical illustration of the views explained in the body of the work, and given us much interesting information respecting the treatment pursued. Throughout his work, Dr. Huestis gives evidence of a reflecting and cultivated mind, zealous in the cause of medical science, and disposed to contribute all in his power to its extension and improvement. We sincerely hope that his efforts will continue unremitting. His opportunities and situation in the Southern States afford him full scope for the indulgence of his laudable propensities, and we believe they will not be thrown away. We shall be at all times happy to hear from him.

ART. III. *Researches and Observations on the use of* PHOSPHORUS, *in the treatment of various diseases.* By J. F. DANIEL LOBSTEIN, M. D., of the Faculty of Paris, late Physician of the Military Hospitals and army of France, &c. &c. 8vo. pp. 107. Philadelphia, 1825.

THE author of this little work informs us, that it was originally published in Europe in 1815, under the title of "*Recherches et Observations sur le Phosphore.*" From the favourable reception which it there met with, he has been induced, since his removal to this country, to offer a translation of it in the English language. In so doing, Dr. Lobstein has rendered an acceptable service to the medical public in this country, although we cannot flatter him with the prospect that his medicine, notwithstanding his high encomiums of it, will ever become very popular. On this point, however, it is not becoming to speak with any degree of certainty. It is an old remark, and certainly a just one, that our most virulent poisons are among our best medicines. And it is impossible for us to say whether at some future period of progressing knowledge, the active and deleterious properties of phosphorus may not be so completely brought under the dominion of science, as to render it not merely a safe, but an invaluable addition to the stock of our materia medica. At any rate it is the part of true philosophy to investigate with accuracy the precise powers of every article capable of producing such potent effects on the human system.

The first and second sections of Dr. Lobstein's book, relating to the history of phosphorus, and to its physical and chemical properties, contain nothing worthy of particular notice.

The next section treats of the mode of administering phosphorus, and is important, inasmuch as its effects differ very materially, according not merely to the *dose*, but the *vehicle* in which it is given. The form which of all others is preferred by our author, is the solution of it in sulphuric ether. It is the only way in which he thinks phosphorus can be given with safety. The addition of a small quantity of distilled aromatic oil, renders it still more active and regular in its operation. The solution of the phosphorus is thus made more perfect. To prevent its decomposition, which is the principal object to be guarded against, it should be given in a little syrup, or on a lump of sugar.

With regard to the dose, our author tells us, that experience has proved, that in the majority of cases, one grain of phosphorus is a sufficient quantity to be taken in twenty-four hours. Hufeland states, that to give it in larger quantities than two grains in twenty-four hours is attended with danger. The only general rule that can be safely observed in administering this powerful article is to commence with small doses, and to increase them as circumstances may require. Whenever it causes a sensation of burning in the stomach, or vomiting, its use is of course to be discontinued.

Professor Lœbenstein Lœbel, who appears to have made extensive trials with phosphorus, has furnished some interesting facts concerning its operation, which are detailed by our author. According to his experience, a larger dose of it can be borne in cold and rainy seasons, than in those in which the air is dry and pure. Taken when the stomach is empty, he has never witnessed any good effects from its use. Food should have been taken at least an hour before its exhibition. With regard to the regimen suitable during the use of phosphorus, he tells us that highly seasoned food, acid drinks generally, milk, fruits and vegetables, such as cabbage and radishes are injurious. The articles last mentioned are more especially incompatible with the use of phosphorus. They occasion a sense of fulness about the præcordia, accompanied by an intolerable anxiety and heart-burn; and not unfrequently vomiting and purging. In cases where the appetite is impaired, aromatic soups, with nutmeg, decoction of vermicelli, sago, &c. may be used; where the appetite on the contrary is good, and digestion vigorous, animal food and the leguminous vegetables are recommended as the proper aliments. As a drink, salep, and other mucilaginous articles, mixed with good wine, are allowed. No drinks, however, are to be allowed immediately after taking the phosphorus. During its use, the patient should be particularly cautious to avoid the effects of cold, which, however gradually applied, produces vertigo and diarrhœa. Flannel is recommended to be worn, and the warm bath frequently to be used as an auxiliary. It is stated that professor Lœbenstein Lœbel "often employed phosphorus for two months without any evident effect, until he has had recourse to the warm bath, when the most striking change was observed. This was particularly the case in nervous diseases. The patient should not remain in the bath more than a quarter of an hour."

We have been designedly thus minute in relation to the manner in which phosphorus is to be used, for the purpose of putting on their guard those who may be inclined to make any experiments with this powerful substance.

The next section treats of the "effects of phosphorus on the animal economy."

To ascertain the effects of phosphorus, several physicians have made experiments with it on their own persons. Alphonse Le Roy took three grains of it in treacle. For two hours he found himself in a state of great uneasiness. On drinking frequently of small quantities of cold water, this went off in a few hours. His urine was of a high red colour:

on the next day his strength was doubled, and his venereal appetite insupportable.

Doctor Bouttatz took twenty drops every four hours, of a solution of four grains of phosphorus in half an ounce of ether. The first dose occasioned nausea, which was relieved by drinking some cold water. The second created a great appetite; the pulse was excited, the natural temperature augmented, and a universal excitement produced. He continued its use until evening, and no inconvenience followed; on the contrary he found an augmentation of strength, and a great excitement of the genital organs. His urine was also much increased in quantity.

According to our author, "phosphorus is a remedy which extends its action over every part of the animal economy, but it is in the nervous system that it more particularly demonstrates its power. Its action is very prompt, intense, but not durable. It is one of the most powerful of the volatile stimuli, and is particularly calculated to revive failing vitality."

In acute diseases, as typhus, nervous fever, &c., Dr. Lobstein gives the following account of the effects of phosphorus.

> "In acute diseases, as typhus, nervous fevers, &c. the effects of phosphorus are manifest sometimes in the course of about four hours, at others only after twenty-four hours. The temperature of the body is restored, perspiration produced, the pulse relieved, the urine is passed in greater quantities, and contains an unusual quantity of sediment; the bowels, if they have been constipated, become relaxed; the stools have a sulphurous odour, and are luminous in the dark: delirium ceases, and the patient recovers his mental powers; gentle sleep repairs his strength; his tongue becomes clean, the appetite returns, and in fine, joy seems depicted on all his person, &c.
>
> "These phenomena are differently manifested in individuals of different ages, also in different diseases. They are less observable in chronic diseases." p. 30.

An account of various interesting experiments upon animals is given by our author, which we quote.

"Dr. Bouttatz triturated a grain and a half of phosphorus with the yolk of an egg, some sugar, and two ounces of water. He mixed a small portion of this with bread and meat and gave it to two cats; one of the cats eat of it, the other not being hungry, smelled it several times, but would not eat it. The first cat vomited, an hour afterwards, all that she had eaten, but again eat what she had thrown up, as is the practice of these animals. Her cries indicated much uneasiness; she vomited a second time, and was seized with violent convulsions; she ran to the right and left, and frequently jumped half a foot high. By ten o'clock at night all these symptoms were exaggerated. The convulsions were so violent that the animal rolled about and extended her paws again, she would throw herself on her back, extending her legs upwards, and remaining sometime in this position, she would cry piteously. It was impossible to make her drink. After about eleven hours these symptoms subsided, so that hopes were entertained of her perfect recovery, but she eventually died.

"On dissection her stomach was found empty and somewhat inflamed; the inflammation was more strongly marked in the duodenum, and the gall-bladder, the lower intestines were tumefied, and were phosphorescent in the dark.

"Of six dogs to whom Professor Lœbenstein-Lœbel administered phosphorus, he was able to save but two by pouring oil down their throats. Dissection of the others showed distinct traces of gangrene of the stomach: this viscus was hardened, and presented numerous brown spots, with black specks in the middle, which when rubbed with the fingers gave out a disagreeable odour resembling burned horn or sulphur. They were not frangible, but hard like horn.

"Dr. Giulio, Professor of medicine at Turin, and also doctors Brera and Mugetti, have made analogous experiments on dogs, young cocks and other animals. The vapour of phosphorus, and also the simple contact of the solid substance with the fauces proved fatal to frogs." p. 33, 34.

To show with what caution phosphorus should be administered, it is proper to allude to some of the effects which have been known to result from its use. In some instances it has produced scirrhus of the stomach, and all its attendant evils. Hufeland knew many cases in which persons who had taken phosphorus from quacks, after having been afflicted with cardialgia, indigestion, &c., finally sunk under marasmus and hectic fever. On dissection, the stomach was observed in a scirrhous condition.

The following tragical case is related as occurring to professor Lœbenstein Lœbel.

"He gave only the eighth of a grain of phosphorus in substance, to a man who had been eight years affected with epilepsy consequent to affright; and twenty-five minutes after taking this dose, the patient felt an extraordinary heat in the stomach, which was succeeded by great thirst, anxiety, and convulsions of the muscles of the face. He complained of chilliness, the extremities became cold, the eyes glassy, the lips pale, the pulse feeble, and the strength diminished, until death terminated the scene."—p. 32.

The following case is related on the authority of professor Lauth of Strasburgh.

"A woman aged fifty-two, was afflicted for a year, with pain in the limbs and weakness, to such a degree that she was scarcely able to walk. She took, during three days, a spoonful of phosphoric emulsion, containing one-fourth of a grain of phosphorus, morning and evening. On the fourth day she took three doses, and shortly after she vomited an insipid water, and complained of violent pain in the stomach. The use of the phosphorus was now suspended, and mucilaginous drinks prescribed, but without success in alleviating the pain. It was felt throughout all the belly, but was more particularly intense in the stomach. The patient continued to vomit greenish matter, and finally black; her stools were of the same nature. The belly became tympanitic and extremely sensitive: the fever, which commenced with the pain in the stomach, was accompanied by a small and very frequent pulse: all the symptoms indicated inflammation of the stomach and intestines, with which the patient died after three days suffering.

"Professor Lauth opened the body on the next day. The lungs presented nothing remarkable. The epiploon, which was very large and fatty, covered the smaller part of the intestines. The exterior of the stomach presented no sign of disease, but all the small intestines were livid and black, and the mesentery exhibited signs of excessive inflammation. He opened the œsophagus, the stomach and the intestines; the internal surface of the œsaphagus was inflamed, the stomach and small intestines were filled with a black fluid, and their internal surface was of a reddish colour. Besides this general inflammation, the internal surface of the cordia was studded with innumerable points, as if it had been burned; the large intestines were in a natural condition." p. 37, 8, 9.

The next section is entitled, "clinical observation," and contains a collection of cases reported by different distinguished physicians who have tested the virtues of phosphorus as a medicine. The authors from whom the cases are selected, are Alphonse Le Roy, Weickard, Conradi, Hufeland, Gaultier Claubray, Lentin, Luitzelberger, Handel, Remer, and Lœbenstein Lœbel. The diseases in which phosphorus was found useful by these physicians, were putrid, malignant and intermittent fevers, in chronic cephalalgia, extreme debility, gout, paralysis, dropsy, passive hæmorrhage, epilepsy, gutta serena, mania.

The remainder of the book is occupied with original cases by the author. For them we must refer to the work itself, which terminates with the following summary, with which we shall close our notice.

"It is inferred, from what has been said respecting the medical use of phosphorus,

"1st. That it is a remedy capable of producing extraordinary effects in various internal diseases.

"2d. That it is extremely dangerous to administer it in substance, as in that form it is capable of acting as a caustic, and producing the most violent inflammation, gangrene, and death.

"3d. That we should reject every form of its exhibition, in which it is not completely diffused throughout the vehicle in which it is given; such as pills, bolusses, electuaries, emulsions, conserves, &c. from which it may become disengaged in the stomach.

"4th. That its solution in sulphuric ether with the addition of a small proportion of aromatic oil, appears to be the best form for its exhibition.

"5th. That phosphorus exhibited in this form loses its caustic quality, and becomes simply an analeptic and a stimulant.

"6th. That much caution is necessary in the exhibition of this remedy, and it should therefore be confined to judicious hands.

"7th. That it should always be given in small doses in the beginning, and its quantity increased, according to circumstances, and its use gradually relinquished.

"8th. That it is not to be regarded as an universal panacea, capable of curing all inveterate diseases.

"9th. That it need not be used until ordinary means have been tried.

"10th. That its good effects are confined to asthenic diseases, chronic agues, in which its action is momentary, but very intense.

"11th. That the diseases in which it has been unsuccessful are, typhus fevers, with extreme prostration of vital energy; and in cases of complicated disorders; in obstinate intermittent fevers, rheumatism, gout, chlorosis and dropsy; and particularly in nervous disorders: such as apoplexy, syncopy, paralysis, convulsions, epilepsy, mania, obstinate head-ache, gutta serena, cardialgia.

"12th. Finally, phosphorus is found to be useful in cases of loss of blood, with diminution of strength, in marasmus, phthisis, and caries of the bones." p. 105, 6, 7.

Medical and Philosophical Intelligence.

FOREIGN.

ANATOMY AND PHYSIOLOGY.

M. **Magendie** *on the Insensibility of the Nerves of the Senses.*—This celebrated physiologist has ascertained by several experiments, that the peculiar nerves of the senses are less sensible than is usually supposed. In operating for cataract on a woman, he accidentally touched the retina with the instrument, but she manifested no sensation. He afterwards touched the retina of both eyes, so as to produce the same result, in the most satisfactory manner.

Mr. **Wiltbank** *on the Action of the Heart.*—From several experiments made upon animals to ascertain some disputed points relative to the heart, Mr. Wiltbank concludes—

"That contrary to the theory of Le Gallios, the action of the heart, and so much of the circulation of the blood as depends upon the action of the heart, are completely independent of the whole source of nervous power; and having gone thus far, we can, in my opinion, have no difficulty in assigning to the heart the proper cause of its action. This is, without the least shadow of doubt in my own, and I think in every ingenuous mind, the vis insita of Haller. It is by this theory alone, that we are enabled to explain the cause of the action and propulsive power of the heart, after the destruction of the brain and medulla spinalis; and even after the removal of the heart from the body. In vain may the adversaries of the vis insita attempt to explain these facts, or confirm them to any other theory. The whole of the difficulties raised against the theory of Haller since his time, have been reduced by Le Gallios to four; these are, 1st, Why does the heart receive nerves? 2d, Why is it influenced by the passions? 3d, Why is it not subjected to the will? 4th, Why does the circulation continue in acephalpus and decapitated animals?

"Let us first observe Le Gallois' explanations of these objections. 'The heart,' says he, 'receives nerves, and is eminently subject to the passions, because it is animated by the whole of the spinal marrow. It does not obey the will, because none of the organs which are under the influence of the whole nervous power are subject to it. In fine, the circulation continues in acephalous and decapitated animals, because the motions of the heart do not depend on the brain, or only depend on it in a secondary way.'

"To say nothing of the confusion left on the subject by this explanation, let me ask the explanation of one fact, the truth of which Le Gallois himself admits. Why have children been born alive without either brain or spinal marrow? While this question, as heretofore, remains unanswered, there is a death-blow to the theory of Le Gallois, which it never can survive. By the late views and discoveries of Messrs. Magendie and Bell, we are enabled, in a very satisfactory manner, to explain these hitherto inexplicable difficulties. By these gentlemen, the nerves are divided into those of sensation, and those of volition; and these are distinct from each other. Now the nerves of the heart are evidently nerves of sensation, and not of volition: hence their use. These nerves also serve to establish a connexion between the heart (which would otherwise be an insulated organ,) and every part of the system; thus we can account for the sympathies that exist best between the heart and the other organs of the body, the influence of the passions upon it, &c. The third and fourth, so far from objections, are more explicable on the vis insita, than on any other theory whatever. It, indeed, appears astonishing that such frivolous objections should be proposed, for the third is immediately removed when we consider that the heart owes its action to an innate principle, and the fourth, that it is completely independent of the whole source of nervous power. When, however, we oppose to these difficulties such, of a contrary nature, as has been done in the course of this essay, the objections to the visa insita all vanish, and it becomes firmly re-established, in defiance of all the efforts of its adversaries."—*Anderson's Quar. Journ.*

Of the Healthy Appearance of the Mucous Surface of the Digestive Organs. By M. Billard, M. D. &c.—The conclusion which M. Billard deduces from his observations on this subject are the following:

1st. The internal surface of the intestines offers certain differences of appearance, according to the age of the individual, and according as it may be examined during or after digestion; but these differences are only modifications of the colour, and of the natural texture of the membrane.

2d. The mucous surface is of a beautiful rose-colour in the fœtus, of a milky whiteness in early age, and of an ash colour, or greyish white in the adult and advanced age.

3d. In individuals who have died during digestion, the mucous coat of the stomach and duodenum, and the commencement of the jejunum, is almost always slightly rose-coloured.

4th It may be said, as a general result, that the mucous coat of the digestive canal is, when healthy, of a whitish colour, or white approaching to an ash-colour.

5th. The mucous membrane of the stomach never presents a morbid aspect in health, nor black or dark-coloured spots.

6th. The muciparous glands are either not apparent, or are so in very small numbers, at the internal surface of the stomach and intestines.

7th. These glands may be naturally developed in considerable number, without the health being injured.—*De la Membrane Muqueuse Gastro-Intestinale, dans l'etat sain et dans l'etat inflammatoire, &c.* 8vo. p. 564, *Paris*, 1825.—*Lond. Med. Repos.*

PATHOLOGY AND THERAPEUTICS.

Dr. Brandreth's Case of Hydrophobia.—John Threlfall, aged eighteen, of a strong healthy constitution, was bit in November on the finger by a dog known to be rabid, which after bit a man who died of hydrophobia the succeeding spring. He was seized on Wednesday the 13th October, nearly eleven months after he was bit, with the dreadful symptoms.

On the morning of Friday, says Dr. Brandreth, he was suffering under violent and incessant spasms of the diaphragm and stomach; continued but ineffectual attempts to vomit: occasionally spitting out, with extreme agitation, a little frothy saliva. He endeavoured to strike every one that came near him; but requested his father and brother to hold his hand that he might not injure them. In a short time he became quieted, but expressed great anxiety at any person passing or moving near him. His pulse at the wrist was quite imperceptible, but the action of the heart very violent, and so rapid as not to be counted; the lower jaw was fixed upon the breast, and the expression of the countenance was indescribably horrid. It was the opinion of every one present, that a very short time must terminate his sufferings. It was agreed, however, to inject the acetate of morphia, into the veins, as recommended by Dr. Booth; and the detail of the case will show the effects produced by it.

At 2 o'clock, 24 minims were injected with a little warm water into the orifice which had been made when he was bled in the morning. This was accomplished with much difficulty, as he became again very violent, and it was necessary to restrain him by absolute force. In a few minutes he was more composed, and told his father he should live a little longer. His pulse became distinct, 140, and the action of the heart had considerably diminished.

At 20 and 50 minutes past 2, the same injection was repeated, which he allowed to be done without opposition; the pulse was now 120, and tolerably firm. Some brandy and water was injected into his mouth with a syringe, but he threw it out with great force. He continued frequently spitting, but endeavoured not to bit any body with it. He now showed his tongue without difficulty, which was excessively dry, and a little furred, and he spoke and answered some questions that were put to him.

At 15 minutes past 3, two moxas were applied over the stomach; he remained perfectly quiet during the time they were burning, and said he felt relieved.

45 minutes past 3, 30 drops were injected. He now eat some bread and butter without difficulty, and attempted to drink some ale, when the convulsions were renewed as soon as the glass was in his hand; but in a few minutes he took a spoonful with great exertion. The pulse was 140, and distinct; his countenance seemed much improved; he conversed with apparent ease. Pouring water into a basin produced no uneasiness; and when some was splashed on the floor, he merely raised himself to look at it. He complained that his throat was dry, and he had nothing to spit out.

20 minutes past 4.—Rational and composed; pulse 150, and very weak.

40 minutes past 4.—Two more moxas were applied, which appeared to give relief; the action of the heart was moderate, pulse 120; he talked a good deal in a collected manner, and was not at all affected by persons sitting on the bed, or walking about the room.

30 minutes past 5.—Injected a pint of warm water into the vein; the pulse was 90, distinct, and the action of the heart natural.

30 minutes past 6.—30 minims of the acetate were injected: soon after the pulse was 100; the tongue moist and clean; he showed it without difficulty; but had occasionally slight startings. At this time he appeared so much relieved, that some of the gentlemen began to entertain hopes of a favourable result. He continued in this state for an hour, when the pulse became gradually feeble and slow; and when he endeavoured to put his tongue out, it was twisted round in such a manner as to show the under surface.

8 o'clock.—The pulse was imperceptible, and he was bedewed with clammy perspiration. Another injection of ℥viii. of warm water was had recourse to. There was a considerable quantity of air distinctly felt in the cellular substance about the chest; he made frequent violent attempts to vomit; the teeth were firmly fixed together; and at half-past eight the countenance became of a leaden hue, and he died in a strong convulsion. The body was examined at 7 o'clock of the following morning, ten hours after death.

Dissection.—The vessels of the dura mater were gorged with blood; the longitudinal sinus was full of dark blood, mixed with globules of air; the ventricles contained half an ounce of fluid; the brain was very firm, and studded with numerous red points; the choroid plexus unusually turgid; the cerebellum was remarkably vascular, and part of the cineritious substance in a pulpy state. The blood was coagulated in the lateral sinuses, but not in the longitudinal. On lowering the head, a considerable quantity of fluid escaped from the spinal column. On opening the integuments of the throat, the cellular membrane was found distended with air, which was ascertained, by inflating the lungs, not to proceed from them. The small intestines were quite blown up with air, and exhibited marks of incipient inflammation on their entire surface. The omentum and colon were quite out of sight, and the latter so knotted and small, as in many places to be incapable of admitting the little finger. The upper and outer surface of the stomach was healthy; but upon lifting it up, a large perforation was discovered, capable of admitting the closed hand, from which a clear-coloured fluid had escaped into the abdomen. The pericardium contained ℥ss. of fluid, and was highly vascular. The right auricle and ventricle were distended with coagula, and the left entirely empty. The cellular and adipose membrane surrounding the aorta contained air. The lungs, liver, diaphragm, kidneys, and bladder, were perfectly healthy. The whole pharynx and trachea were highly inflamed, and the back of the throat was covered with bloody and frothy mucus. The lower part of the œsophagus was deprived of its mucous membrane. The stomach, in general, exhibited considerable marks of disease, and there were many extensive spots of extravasated blood between the coats.—*Edinburgh Med. and Surg. Jour.*

Dr. Renwick's Case of Hydrophobia.—John Duckworth, aged fifteen, was bitten by a dog about a month before he was seized. He was blooded to some extent, had first mercury with opium, and then solution of superacetate of lead, twenty drops on sugar every hour, according to the plan of Dr. Fayerman of Norwich. This, however, produced no visible amendment, and he died.

Dissection.—Twenty-one hours after death, by Mr. Halton, in the presence of Drs. Renwick and Jeffreys, Mr. M'Donald, Mr. Jeffrey, Mr. Wilkinson, Mr. Reynolds, and others.

Examination of the head.—Upon dissecting back the scalp, it did not exhibit any undue degree of vascularity. The inner surface of the calvaria was turgid with blood. The dura mater presented a general scarlet blush, and upon raising it from the surface of the tunica arachnoidea, a preternatural adhesion was observed parallel to the course of the longitudinal sinus, upon the left hemisphere of the cerebrum.

The tunica arachnoidea was observed to be opaque in patches, but this appearance was not general. There was not any effusion beneath it, between it and the pia mater.

The pia mater manifested a great degree of vascularity; a general vivid redness pervaded its whole surface. The vessels upon the surface of the cerebrum were gorged with blood.

Several horizontal sections of the substance of the cerebrum, displaying its medullary structure, exposed numerous bloody points, from which blood afterwards oozed; in fact, the substance of the cerebrum appeared in jected with blood. Nothing remarkable was observed in the lateral ventricles, nor was there any deviation from the usual appearance in the plexus choroides of each side, or the velum interpositum connecting them. In the comissura mollis, no deviation from its usual consistency was noticed. The pia mater investing the cerebellum was very vascular, but the substance of the cerebellum did not partake of the vascularity; its consistence was softer than usual. The medulla oblongata was natural, the theca vertebralis was very vascular. The bones of the skull were remarkably thin.

Examination of the Neck, &c.—The par vagum, carotid artery, and descendens noni were exposed, and no deviation from the natural appearance was observed. The cervical nerves were next examined, but the vascularity so strikingly evident in a former case, (as published by Dr. Brandreth in the last Edinburgh Medical and Surgical Journal, at the dissection of which I assisted,) could not in the least degree be traced, nor did the deep or superficial nerves in the vicinity of the cicatrix manifest any blush. No appearance of inflamed absorbents could be traced. As moxas had been applied to the cicatrices, and had taken deep effect, nothing could be distinguished beneath them.

Examination of the Pharynx, &c.—The mouth, fauces, and pharynx were free from inflammation. The œsophagus did not present any unusual appearance until it approached the cardia, where there were considerable marks of inflammation, and some spots of extravasation. The inflammation extended into the stomach for some way surrounding the cardiac orifice, and the extravasation was arranged in a curious speckled manner. Upon laying open the stomach, the inflammation and extravasation were not general over its mucous surface, but confined to the neighbourhood of the cardia. No aliment was found within it. The liver and spleen were healthy. The kidneys were remarked to be very vascular. The intestines were healthy with the exception of the ileum, which was found inflamed upon its inner surface, about six or eight inches from its termination in the cœcum, and within it there was a secretion resembling bird-lime in tenacity and colour. The exterior of the intestines in the vicinity exhibited a slight blush of inflammation.

Examination of the Larynx, &c.—The larynx was natural in appearance. The trachea presented a slight blush of inflammation upon its inner surface at the lower part. The right lung was healthy. A number of firm adhesions were found in the right cavity of the chest. Upon the left side no adhesions were observed, but a considerable effusion of serum was noticed in the bag of the pleura. The pleura costalis of this side was inflamed; the pleura pulmonalis upon the upper and back part of the left lung was also inflamed, and the substance of the lung congested with blood. The heart and pericardium were healthy; but more than the usual quantity of serum was found in the bag of the pericardium.

As in the case of Mr. N., the inflamed appearance of the nerves led to the examination of the spinal column; not observing any thing peculiar in the nerves of the neck in this dissection, it was not considered important to expose either the spinal marrow or the nerves within the pelvis.—*Lancet.*

Various Morbid Alterations in new-born Infants.—N. Bricheteau lately read, to the Academie Royale de Medicine, a report on the work of Dr. Vernon, containing three cases, in which the fœtus had been affected with inflammations, similar to those which affect the adult. In one of these, a child, which only lived twelve or fifteen hours, the post-mortem examination led to the discovery of a pleurisy,—viz. effusion of purulent fluid in the thorax, formation of false membrane on the pleura, redness and injection of vessels. In the second, the infant presented traces of peritonitis; and in the third there had been inflammation of the thymous gland, with the formation of pus in the interior of that organ. M. Bricheteau added other facts to those of M. Vernon: for example, he quoted instances in which children were born with small-pox; a circumstance confirmed by the experience of various other members of the Academy. M. Desormeaux gave the history of a child who was born with every symptom of an intense enteritis of long standing, and which was cured. M. Hussan lately opened, at the Hôtel Dieu, the bodies of two infants,—one born dead at the seventh month, the other which lived only eight days,—both of which had tubercles, already softened, and in a state of suppuration: the former in the lungs, although the mother was in good health; the latter in the liver. MM. Dupuy and Andral mentioned having found tubercles in the fœtuses of some of the lower animals; and M. Andral, in opening the body of a woman who died of phthisis, found the supra-renal capsules of the fœtus inflamed and suppurated.—*Lond. Med. and Phys. Jour.*

Treatment of Cynanche Trachealis.—The general symptoms of *croup*, the extreme danger of the disease, the frequent inefficacy even of the most active and best-directed treatment, and the striking appearances on dissection, are familiar to every practitioner. There is one fact, however, in the history of this disease, which has not as yet been noticed by authors on the subject; and one means of treatment, which has been repeatedly successful in my own hands, and in the hands of those from whom I first received my information of its utility, which, I have reason to believe has not come into general use.

The fact to which I refer is, that the exudation of *fibrin* very frequently commences on the surface of the *tonsils*, thence spreads along the arches of the palate, coats the posterior surface of the velum palati, sometimes surrounds and encloses the uvula; and at last descending, covers the internal surface of the pharynx and œsophagus, the larynx and trachea. That this is the frequent progress of the fibrinous exudation I am convinced, from the careful and repeated observation of the phenomena during life and upon dissection.

What is of much more importance, however, than the observation of a pathological fact, is the ascertained efficacy of a means of cure for this disease. Not merely have I repeatedly found the application of a solution of *nitrate of silver* completely successful in removing the fibrinous crust covering the tonsils, velum, and uvula, but I have been led to attribute the rapid alleviation and ultimate removal of all other symptoms to this remedy; even in cases in which, from the severity and peculiar signs of the complaint, I had no doubt that fibrin had already exuded from the lining membrane of the larynx and trachea.

The solution which I employ is *a scruple* of nitrate of silver in an ounce of distilled water. By means of a large camel-hair pencil, this solution is to be freely applied once or twice a day, according to the severity of the symptoms, to the whole lining membranes of the fauces. The surface of the tonsils, or wherever else the fibrinous crust is actually in view, will, of course, be particularly attended to; but I do not hesitate to push the pencil to the lower part of the pharynx.

This remedy, so far from being productive of any irritation, beyond the mere mechanical and temporary one attending its employment, uniformly alleviates the symptoms of croup; such as the difficult respiration, the barking cough, and the peculiar anxiety of the little patient. It has evidently such an effect upon the diseased surfaces, both those which it actually touches, and those which are continuous, as to induce them to throw off the false membrane by which they are covered, and, it appears, also to prevent the further progress of the exudation.—*W. Mackenzie, And. Prof. Anat. and Surg. at Glasgow, in the Edin. Med. Journ., Ap.* 1825.

Tympanites Pericardii, Case of.—Mr. Scott, of the Haymarket, aged about forty-seven, had, for three or four years been declining in health, but had not been under regular medical superintendence, till a few weeks before his decease: no regular history of the complaint, therefore, could be obtained. He stated, however, that his appetite and strength had gradually declined, but his chief complaint was a fluttering, a palpitation, and a sense of anxiety about the region of the heart, with disturbed sleep and frightful dreams.

When seen a few weeks before death, his countenance was like that of a person in a state of anæmia, except that there was also a chloritic tinge in the skin; the pulse was full, quick, and irregular; there was a tendency to œdema about the ankles; the appetite was almost entirely gone, and the patient felt approaches to syncope on using any exertion, or ascending stairs. His mind was desponding, and temper irritable; the motions from his bowels were perfectly healthy; the chest in every part resounded remarkably well, and, in the region of the heart, *percussion* elicited as clear a sound as in any other part; the *impulse* of the heart against the ribs was very feeble, and scarcely audible; it was also irregular, in correspondence with the state of the pulse.

The patient died suddenly in February last, and the following appearances are recorded by Dr. Johnson, as having been observed on examination after death; he was himself present.

The body extenuated, but still there was some peculiarly yellow fat on the chest and abdomen; the muscles, though wasted, were of a vivid red colour; all the organs in the abdomen were sound; on opening the chest, the lungs presented a beautiful blue appearance, sparingly mottled with white; they were very sound. Between the lungs there presented itself a pellucid membrane distended with air. This was found to be the *pericardium*, reduced to a most extraordinary degree of tensity, and distended with a considerable quantity of *air*. The heart was small, not half filling the pericardium, and extremely degenerated in substance; a great part of its muscular structure being converted into a kind of fat; the whole was so lacerable, as scarcely to bear handling; the parietes of the left ventricle were not more than a quarter of an inch in thickness; the internal surfaces of the cavities were pale, wasted, and not containing a single drop of blood; neither was any blood to be seen in the large vessels issuing from the heart; there was nothing particular in the vascular structure of this organ.

Dr. Johnson adds, " That he has met with several cases where the heart was in this degenerated condition, but never before observed *such a distension of the pericardium by air*, that it is quite evident, from the size of the pericardium, and its extreme tensity, that this collection of air must have been of some standing, and that this phenomenon accounts for the region of the heart being as sonorous as any other part of the chest, which is not usually the case."—*Med. Chir. Rev. Ap.* 1825, p. 465.

Note.—This report is highly interesting on account of the rarity of the disease to which it relates, so rare, indeed, that Morgagni says he never saw an example of it, and Dr. Baillie seems to have been equally unfortunate.

Case of Phlegmasia Dolens. By Dr. Davis.—W. J. W., a medical gentleman, was attacked in the right thigh and leg by phlegmasia dolens, on the 10th of February, 1825, whilst suffering in the last stage of phthisis pulmonalis. He had, at this time, been confined upwards of eleven months with this latter disease, and his pulse was then very rapid, and the hectic flushings strikingly marked. The phlegmasia dolens became perfectly characterised: the whole limb was uniformly enlarged, and extremely painful to Poupart's ligament; it had a dull white appearance, and exhibited no indentation from pressure. The patient was attended by Dr. Williams and Dr. Stour Pennington.

Lint, saturated with warm water, was applied over the whole limb, which was therefore encased with fine oil-skin: these means gave the patient considerable ease, but produced no apparent alteration of the disorder. The left leg was somewhat swollen, and slightly plainful a few days before the patient's death.

Appearance on dissection.—The abdominal cavity having been laid open, the right common internal and external iliac veins seemed unusually prominent, and appeared to the touch of a firm consistence, like chord. Upon opening these veins, they were found to be filled with layers of coagulable lymph, so as to render them completely impervious. This state of disease was traced as far as the upper part of the femoral vein. The corresponding arteries were healthy. The lymphatics were not examined. The vessels on the left side of the pelvis were quite pervious and natural.—*Ibid.*

OBSTETRICS.

Uterus, Laceration of, in Parturition.—In the years 1819-20-21, 8600 patients were delivered in the Lying-in Hospital of Dublin, and of this number *twenty* suffered *laceration of the uterus.*

Of these twenty cases, *five* occurred in women parturient with *female* children, and *fifteen* in women parturient with *male* children. The *sex* of the infants, therefore, would seem to have a considerable influence in the production of this accident—a circumstance doubtless connected with the greater *size of the head* in the generality of *male* infants.

Thus, of sixty *male* and sixty *female* infants, born at full time, and examined by Dr. Clarke, the averaged circumference of the *head* in the former was found to be *fourteen* inches, and in the latter only *thirteen and five-eights;* and of one hundred and twenty infants examined by the same physician, the circumference of the head exceeded *fourteen inches and a half* in six only, all of whom where *males.*

From examination after death, it would appear that the *neck* of the uterus is the part most frequently lacerated, and that the rent is generally in a transverse direction.—*M'Keever in Lond. Med. Repos.*

Case of Cæsarian Operation—By Dr. Schonberg, of Naples.—Elizabeth Hugh, twenty-eight years of age, of very short stature, and when a child affected with rickets, had for several years past been subject to very severe attacks of convulsions, and on the 7th of August, 1823, towards the end of her first pregnancy, labour-pains came on. At the same time she was seized with convulsions, which resisted every means I could try, and continued for thirteen or fourteen hours, wherefore I determined on delivering the woman. On a close examination, I found that the mouth of the womb was dilated, that the waters had escaped, and the head of the child was foremost, but that the pelvis between the rami of the ischiæ and pubes was extremely narrow, not more than two inches in width. Under these circumstances, I called in a physician-accoucheur, who found the woman in this state, but had not an opportunity of ascertaining if the child was alive or not; a circumstance which was to decide whether we should have recourse to the Cæsarian operation, or the perforation of the head of the child. In consequence of the uncertainty whether the child was alive or not, and the frequency of the labour-pains, we determined to wait till the following morning. August 8th.—The woman rested the whole of the night, and this morning felt considerably refreshed. In our examinations we could distinctly feel the motions of the child, which lay with the face foremost, and thus we decided on the Cæsarian operation, which was performed at two in the afternoon by H. Leuch, one of the surgeons to the hospital. An incision was made in the course of the linea alba, from about an inch below the naval to the pubes, and with a second the uterus was opened when in a state of contraction, a labour-pain having occurred at this step of the operation. The fingers were then introduced, the opening in the uterus enlarged, and the placenta detached. The membranes were now ruptured, and the child in part removed from the womb; but just as the head was about to be withdrawn, the uterus contracted round the neck of the child, and it was with some difficulty that the head could be extricated. The intestines now fell forwards, and were obliged to be kept back by an assistant; the placenta was then withdrawn, but no arteries were secured as the bleeding was very slight. The uterus was rendered as clean as possible, all the coagula being removed, and the parts were placed in their natural position. The integuments were kept together by means of sutures, and trips of adhesive plaster; and over these, compresses and a broad bandage were applied.

The child, when removed, was alive, since it moved, and made continued efforts, during half an hour, to breathe: but notwithstanding all our efforts, it shortly died. The woman went on remarkably well; the lochial discharge appeared in the usual quantity; and, in forty-eight days from the operation, she was perfectly well.—*Ibid.*

MATERIA MEDICA.

Euphorbia Lathyris—The Expressed Oil, a mild and active Purgative.—The Euphorbia lathyris, or *caper spurge*, is a native of the south of Europe, and was first introduced into our gardens, where it is now not uncommon, about two centuries ago. It is naturalized somewhere in Bedfordshire, and in most old herb gardens—it flowers in may and June.

From the *seeds* of this plant our oil is obtained by expression, which has lately been proposed as a substitute for the Croton oil, by Dr. Calderini of Milan, who states, that in purgative power it is little inferior to the latter, and that it is preferable in this respect, that its exhibition is not attended by any of those unpleasant symptoms which the acrid and irritating qualities of the Croton oil are so apt to occasion.

When filtered, this oil is, in appearance, very similar to castor oil—it is inodorous, limpid, and neither acrid nor disagreeable to the taste. By long keeping, however, or by exposure to heat, it becomes turbid, dark-coloured, acrid, and afterwards rancid. It burns with a clear flame without smoke, is insoluble in alcohol, and forms a soap with alkalis.

For an adult, the dose is from four to eight drops, which may be given in an emulsion, or in any other convenient vehicle--its action upon the bowels is certain, strong, and prompt; but at the same time mild, for it neither occasions vomiting, tenesmus or pain—unless, indeed, it be in a rancid state, when it becomes drastic, and produces griping.

The application of this plant to medical uses is not new; from Mathiolus, who wrote in 1562, we learn that, in his time it was commonly known in the shops by the name of cataputia, and it is particularly noticed by Gerarde in 1636.

Dioscorides and Galen also are supposed to have mentioned it, as have various other writers, all of whom, however, agree in speaking of it as a very violent purgative, contrary to what he would be led to believe from the statement of Dr. Calderini. This apparent discrepancy arises, in all probability, from this circumstance, that the *entire seeds* were formerly used, and not the *oil* simply, as now recommended.

We may add, that the details given by Dr. Calderini are stated to have been lately confirmed in France, which will, we trust, be a sufficient inducement to the profession in England to give this remedy a speedy trial. The plant is figured in Smith and Sowerby's English Botany, tab. 2255—in Gerarde's Herball, page 503, fig. 18; and in Hill's British Herball, pl. 22.—*London Medical Repository.*

MEDICAL JURISPRUDENCE.

M. Lassaigne's Mode of Detecting Spots of Blood.—From several experiments on this subject, M. Lassaigne concludes—1. That it is easy to distinguish, chemically, the rust produced by blood upon iron or steel instruments, from ordinary rust. 2. That the spots produced by blood upon different tissues, may always be distinguished, even after the lapse of a considerable time. 3. That the application of these means may be useful on many occasions, where it is necessary for the ends of justice. We subjoin one of his methods of treating the rust, the whole paper being too long for insertion in this place.—A small quantity of rust is to be placed in a glass tube, closed at one end, about an inch and a half long, and three lines in diameter, with one or two grammes of distilled water; by slightly agitating the mixture, the albumen, a portion of the colouring matter, and all the salts are re-dissolved; when, upon allowing it to rest, the rust is precipitated. It becomes thick by agitation in the air; it re-converts reddened turnsole into a blue colour; it is coagulated by heat and acids; and by evaporating and calcining the residue in a platina spoon, chloride of sodium, sub-carbonate of soda, and phosphate of lime are obtained.—*Anderson's Quarterly Journal.*

Corpora Lutea, in the ovarium of a child, aged only five years.—It was long imagined that the presence of a *corpus luteum* in one of the ovaria was a demonstrative proof of *impregnation* having previously taken place in the subject to which it belonged. Of late years, however, it has been shown, in the most satisfactory manner, that this opinion is erroneous, and these *marks* or *bodies*, as they are called, have since been attributed to sexual intercourse, or at least to sexual excitement or desire.

Mr. Dunlop, however, mentions a recent instance which shows that this opinion also is unfounded, and that *corpora lutea* may be formed in cases where neither intercourse, nor passion, nor excitement of any kind, could have had place. Dr. Mackintosh, lecturer on midwifery in Edinburgh, he says, has in his museum a preparation taken from the body of a child, which he, in company with Dr. J. Scott, dissected at Piershill Barracks, near Edinburgh.

This child died, it appears, of tubercular disease in the lungs, when not above five years of age. On examination, the *hymen* was found entire, and in the ovaria were numerous *corpora lutea,* as distinct as in the adult mpregnated female.—*Lond. Med. Repos.*

DOMESTIC.

We give place to the following article from our friend Dr. Pascalis, not merely because it contains some account of an interesting work recently published, but because we consider it an act of justice to the distinguished writer, to afford him a fair opportunity of publicly vindicating his claim to originality in relation to some of the theoretical doctrines contained in the work of M. Dariste.—Ed.

Examination of a work entitled, *Recherches pratiques sur la Fievre Jaune* par A. J. Dariste, D. M., of the Royal Academies of Paris, &c.

Respectfully presented to the Director, Sr. Dr. DON JOSE MARIA VARO, to the President, Vice President, Secretaries, and members of the Academy of Practical Medicine of Mexico, by their most obedient and much honoured fellow-corresponding member,

Felix Pascalis.

This work marks an epoch of liberal sentiments among distinguished controversialists, on various questions relative to yellow fever, in the Royal Academy of Medicine of Paris, which highly honours the merit and importance of the labours of the author; there are many seats filled by influential gentlemen, who now subscribe to the opinions he professes, which they had heretofore opposed and rejected. This triumph is no doubt graciously and conscientiously granted, because Mons. Dariste has not only shown himself deeply instructed by facts and experience, but he has also made great advances towards the knowledge of the mysterious causes and nature of one of the most afflicting scourges of human life.

Another remark I beg here to introduce, is that in the still existing controversy of the contagious attribute of yellow fever, the opponents possess the fairest and most productive side of the question; in it, they always have some nice points to elucidate, and some discovery to make, which lead us by degrees to an abundant field of medical and philosophical acquisitions. The contagionists, on the contrary, are on the worst side. Nobody could yet improve upon Chisholm, Gilbert Blane, nor upon Hosack, much less upon Moreau de Jonnés; these eminent writers have given at once all that could be said, and their way to some clearer and more intelligible solution of difficulties, seem for ever sealed up, unless they would perchance change their own ground.

The plain account that can be given of Mons. Dariste is, that with a clear and sound mind, and without the help of classical and literary ornaments, he would give us a candid exposition of the motives which have induced him to publish the results of thirty years' practice in the island of Martinico, than which no theatre could better afford him practical opportunity. He did early mistrust that medical instruction on epidemic diseases from old records, mostly written and dictated by prejudice, by terror, and by incorrect observation; thereby he was soon able to detect many errors, principally those of a government, which in certain matters of science, has been very apt to confuse or retard their most useful progress. He therefore gives us a good exposé of the ancient and recent epidemics, of yellow fever in Europe and America, paying at the same time a due respect to the names of those whom he thinks have usefully contributed to allay, or prevent the frequent recurrence of the occidental pestilence.

The *practical researches* of Mons. Dariste, are divided into six memoirs; the first of which relates only to the yellow fever in the West India islands. It never was imported there from any part of the world: its most ancient ravages there, took place among the Europeans only, and in proportion to their great or ordinary concourse. The natives are not susceptible of its attacks, although it is congenial to their climate, yet during warm seasons, it may be formed in different ports or cities of North and South America; neither is this congeniality, exclusive of the meridional ports of Europe, of the peninsula of Spain, at least; sanitary restrictions do not appear to be preservative against the yellow fever, and without them it does not extend beyond the focus from which it is derived. Dread, fear, terror, and despondency of mind, never fail to make it more fatal amongst strangers.

The *second* memoir relates to the etiology of the yellow fever, concerning its causes and its modes of propagation. These are four in number, and each of them indispensable: 1st, the heat of the season; 2d, a peculiar atmospheric disposition, unknown and occult; 3d, the unhealthy condition of places; 4th, the idiosyncrasy of subjects.

From the third disposition required for the formation of the yellow fever, Mons. Dariste argues against the contagionists, as we have done in this country, where attempts have been made to establish their doctrine, according to the healthy or unhealthy condition of lands and places. That argument is false, says he, which derives an attribute of that disease from the cause which creates it. The yellow fever is never created in pure air; and if brought to it, it will immediately be checked. The idiosyncrasy or unsusceptibility of individuals, is also a direct argument against contagion. It cannot be proved in physiology, that an animal poison ever ceases to be so in any individual of the same species: if so, it cannot be called a virulent absorbable contagion. The facts adduced in proof, and collected throughout the West India islands, and from the uninterrupted commerce with their mother countries during many ages, are new and convincingly striking.

The *third* memoir, is an instructive collection of facts and cases, applicable to various appearances and characters of the disease; but the *fourth* memoir treats principally of the *Diagnosis*, in relation to the black vomit, and hæmorrhage. Of this, the Academic Report contains a more particular exposition. Considering, indeed, the subject independently of the views or hypothesis with which the author connects it, it forms a series of facts in pathology, which must guide intelligent observers to the discovery of the true cause or nature of the yellow fever.

I will only translate several propositions of Mons Dariste.

Its proximate agency is manifested by immediately disturbing the circulation of the capillary vessels, and causing their congestion and echymoses. p. 116. In yellow fever, the whole mass of blood is altered; that fluid no longer retains its colour nor its attributes, and that portion which circulates differs only from that which stagnates in the capillaries, by being less black, and less carbonized.—p. 127. The blood of patients with the yellow fever, accumulated in the capillaries, is black and carbonized; and that quality is more strongly marked, as the disease is more intense, and of a more rapid march. The experiments of the immortal Bichat, have shown, that the blood remains black until it is carried into the lungs, where, by a chemical operation in that organ, it assumes a red colour, which is indispensable for life; a suspended respiration therefore renders it black; then it carries death instead of life, into our organs. When the yellow fever brings a greater determination into the apparatus of respiration, the black colour of the blood is more intense, and its progress more decidedly fatal.—p. 125. The congestion of the capillaries, is evidenced at first by the redness of the conjunctiva, which appear injected, of the face, of the cheeks, of the articulations, and of the mucous membranes, which become of a purple colour in all parts where the capillaries are most apparent.—p. 116. The effusion of black blood in the lungs, and other cavities, as discovered by Autopsia, clearly proves that there has been an influx of blood from the periphery to the centre ; that the abdominal capillaries have suddenly become turgid, &c.—p. 119. In all such cases, I found the lungs turgid with black blood, without vestiges of inflammation ; it was therefore from the congestion of their capillaries, that death had ensued, as it did in the following cases.—p. 121. All those who die in the yellow fever, breathe with extreme anxiety and difficulty. Their respiration is first *anhelous ;* it soon becomes painful, with snorings and sighings; at last it is stertorous and convulsive.—p. 126. Breathing, among many, appears hard and difficult, and it frequently provokes strong and deep inspirations.—p. 163. When the pulse is sinking, a deadly coolness is diffusing itself through the body ; it commences on the hands, and progresses to the centre ; yet, if the pulse should be revived, that symptom does not take place.—p. 164. On opening the body, we constantly find the stomach, the intestines, and even the bronchiæ, in part filled with clots of black blood.—&c. p. 196.

The *fifth* memoir, on *Symptomatology*, and the last on the *treatment*, are highly interesting and conclusive, according to the method adopted by Mons. Dariste, in establishing three periods or stages of the disease ; 1, Irritation ; 2, Calm ; 3, Termination ; and to the two predominating characters, he assigns to it, of sthenic or asthenic fever. The first division, or indication, he however praises and recommends, as the most likely to be successful. With respect to the various remedies he employs, and his rejection of those that have been apprbved or tried, I must abstain to make any comment, on the ground he admits himself, " that of having practised only in the island of Martinico."

But I must remark, that in matter of fact, and observation, Mons. Dariste is perfectly master of his subject ; and that with a reflecting mind and happy perception, he has been able, in his long medical career, to practise usefully, and gather up for us all, and for future generations, more useful materials than many of his cotemporaries.

Farther I must say, that his book, printed in Paris in 1825, contains many views and theoretical principles, the same with those I had the honour to communicate to the Medical Society of this city, in an address I delivered to them on the 11th of November, 1822, which was published on the 20th of the same month in three successive numbers of the Statesman, edited by Messrs. Carter & Prentiss. One hundred copies of the same were retained in the form of a pamphlet, and by me distributed to my friends, at home and abroad. I do not wish to suppose nor to insinuate, from mere possibilities, that Mons. Dariste has known or read that address. From the complexion of his work, and arrangement of materials, as well as from his honorable and eminent character, I am led firmly to believe that he would have equally associated my name to the best part of his views, just as he did me the honour to associate it with celebrated men in his introduction, had he read the address I alluded to. I therefore acknowledge, that he is the discoverer, in 1825, of a part of the diagnosis of yellow fever, just as I was of the whole in the year 1822. And while I feel it a duty to vindicate as my own both the before-mentioned communication and a more extended manuscript on the subject, intended for publication in the ensuing year, I proudly anticipate the honour of their meeting with the support of a colleague, and one of the best qualified medical writers in our arena.

It is now my task succinctly to give the outlines of my theory, as published; and the points of contact with that of Dr. Dariste, will easily be perceived.

I need not here remind the reader what are my views of the carbonic and hydrogenous specific gas, to which I attribute the specific diagnosis of the yellow fever. This is the peculiar disposition of the atmosphere which he calls an *occult quality ;* but I infer that its natural gravity causes it to be retained in the pulmonary cells, where it disturbs and suspends the all-important laws of respiration. These were examined, and namely, that of the *decarbonization* of the blood, of the formation of a pulmonary aqueous vapour, by the departure of hydrogen, which is in quantity equal to that we emit from the cutaneous surfaces, that of the caloric imparted by pure atmospheric air, and that of the hæmethoses, or formation of the blood. All these laws being impaired by the presence of a carbonic and hydrogenous gas in the lungs, I must have concluded that yellow fever, or a protracted asphyxiation, must be the result; thence all that congestion of black blood in the capillaries, that disordered state of respiration, that oozing of black blood and matter, either by exhalation, or by gangrenous scars, that refrigeration of the body, of all which Mons. Dariste gives us a lively picture, and of which I have offered particular details for all viscera in which a lifeless blood abounds, producing congestion, decomposition, echymoses, yellowness, hæmorrhages in the lungs, the stomach, the liver, the kidneys, and even in the brain.

May I be permitted to transcribe the following literal epitome from the above-mentioned address :

" I suppress the details of the successive effects in the human system, from the explained subversion of the laws of respiration, and which exactly constitute the yellow fever. It suffices to notice, that arterial blood deprived of its vitality, affects all organs in which it abounds. The lungs it affects with anhelation ; the heart with fulness ; the brain with stupefaction, or coma ; the stomach with incessant irritation. On the other hand, the same for want of heat and action clogs the capillary and glands, in which it should perform various secretions ; tardy and stagnant, it decomposes itself, and suffuses. The skin with a red, then purple, at last yellow colour, a muscular reaction manifested by pain in the limbs, in the head, in the dorsal and abdominal regions, induce at first a paroxysm of fever, which, by accelerating respiration, might restore regular functions ; but the eventual prostration and collapse are the signals of a fatal termination, at which the accumulated carbon of blood is disgorged from the pori biliarii, more frequently from the inner membrane of the stomach and intestines. At this last stage, gangrene or putrefaction commences; for in this like all other pestilential diseases, it is known to precede agony and death."—*Vide Statesman, Nov.* 21, 1822.

I thus rejoice, Gentlemen, in having obtained such a support of my theory, although limited to a part only, as that of Mons. Dariste; and still more so, after he has obtained the sanction and approbation of that high tribunal, the Royal Academy of Medicine of Paris.

Jefferson Medical College.—With much pleasure we give place to the following notice of the organization of a new medical institution in the city of Philadelphia. Personally acquainted with several of the professors, and entertaining a very high respect for their talents and acquirements, we wish them every possible success in their bold and honourable enterprise.

"The Medical Faculty of *Jefferson College* was instituted in June last, by an act of the trustees of that institution, appointing professors to teach the various branches of knowledge comprised in a regular medical education.

"By the same act the faculty of medicine were authorised to locate themselves in any part of the State of Pennsylvania, affording, in their judgment, the greatest facilities for the discharge of the trust committed to them. In these circumstances, the faculty could not long hesitate in selecting Philadelphia, as obviously presenting to the medical student advantages for improvement far greater than could be found in any other part of the State.

"In order to carry into full execution the design of the trustees, a large and convenient building has been procured, and fitted up in a manner as suitable as could be desired for the lectures and demonstrations connected with a complete course of medical instruction.

"The lectures will commence on the Thursday immediately preceding the first Monday in November next, and will continue until the last of February. The commencement, or time of conferring degrees, will be as early in the month of March as the examination of the candidates will admit.

"Those persons will be entitled to a degree, who shall have attended two full courses of lectures in this school, or one course in any other school which has the power of conferring medical degrees, and one in this institution, and who shall have been found qualified for a degree on a suitable examination.

"The fees for attendance on the lectures will be $15, to each professor, for the course. The fee for graduation, $15. No entrance fee or matriculation ticket will be required.

John Eberle, M. D. Prof. Theor. & Pract.
George M'Clellan, M. D. Prof. Surgery.
Jacob Green, A. M. Prof. Chemistry.

B. Rush Rhees, M. D. Prof. Mat. Med.
F. S. Beattie, M. D. Prof. Inst. of Med. and Midwifery.
Nathan R. Smith, M. D. Prof. Anat. & Physiology.
B. Rush Rhees, *Dean of the Medical Faculty.*"

Boylston Prize.—The Boylston premium for the best Essay, on the question, "To what extent has the Vaccine Disease been found to be a preventive of the Small-pox," has been awarded to John Bell, M. D. of New-York, one of the editors of this Journal.

Travers on the Eye.—We are gratified to learn that the republication of this work is in such a state of forwardness, that its appearance may be looked for early in November. The additions by the American editor, Dr. Delafield, will be numerous, and from his known proficiency in ophthalmic practice, it may confidently be anticipated that the general value and interest of the work will be much increased.

QUARTERLY BIBLIOGRAPHICAL NOTICES.

Report of the Committee on Laws, to the Corporation of the city of New-York, on the subject of interments within the populous part of the city. Read and adopted at a special meeting of the said corporation, on the 9th June, 1825, and published by their order. New-York, pp. 76. 1825.

In our last number we took occasion to notice the recent proceedings of our city corporation, in relation to interments, and to express, at the same time, our entire satisfaction with the decision which had been made. The present report, which was drawn forth in the course of those proceedings, may be looked upon as a summary of the facts and arguments which led to that decision, and as such, it is a document entitled to the respectful consideration of every member of our community. Written as it is by extra professional men, it is not at all surprising that some parts of the report should be liable to exceptions. The general scope of its reasoning is however unanswerable, and until something more formidable than we have seen urged against it shall appear, the corporation must stand fully justified in the eye both of reason and humanity.

On the Surgical Anatomy of the Groin, as connected with Hernia of the Abdomen. By Alexander F. Vache, of New-York. New-York, pp. 52. 1825.

Inaugural dissertation.

Typhus Syncopalis, sinking Typhus, or the spotted fever of New-England, as it appeared in the epidemic of 1823, in Middletown, Connecticut. By Thomas Miner, M. D. Middletown, (Conn.) pp. 32. 1825.

An Inaugural Address delivered before the Medical Society of the county of New-York, on the 8th day of August, 1825. By John Onderdonk, President of the Society. New-York, pp. 24. 1825.

The principal subject adverted to in this address, by the venerable president, is the importance of a religious character to the profession. What there is of the address is so just and pertinent, that our only regret is that it is so concise. We congratulate the society upon enjoying the services of an efficient president, whose moral and professional standing, no less than his years, entitle him to their undivided respect.

Remarks on the disorders of literary men, or an inquiry into the means of preventing the evils usually incident to sedentary and studious habits. Boston, pp. 92. 1825.

A sensible interesting little work, well worthy the perusal of literary men.

Elements of Phrenology. By Charles Caldwell, M. D. Professor of the Institutes of Medicine and Clinical Practice, in Transylvania University. Lexington, Kentucky, pp. 100. 1824.

Journal Medical de la Gironde. Juillet, 1825. Bourdeaux. In exchange.

Litterarische Annalen der gesammten Heilkunde, herausgegeben von Prof. Justus Friedrich Carl Hecker. Berlin, 2 Nos. 1825.

The Annals of Medicine, of which we have received the two first numbers, is a new work commenced by Professor Hecker, assisted by several eminent German Professors and physicians. It promises to be an exceedingly valuable repository of knowledge, and we accept with pleasure the proposal for an exchange.

Practical elucidation of the Nature of Hernia, together with some remarks on the unfit instruments hitherto used for its confinement, with an explanation of the experienced utility and effectual cures of the instrument now recommended. By G. A. Hull, M. D. late President of the Oneida Medical Society. New-York, pp. 28. 1824.

We take some share of reproach to ourselves for not having before this noticed the very great improvements made by Dr. Hull in the construction of trusses. The truth is, it is only recently that our attention was particularly directed to the subject; and we were surprised to find how vastly superior the invention of Dr. Hull was to any instrument of the kind which had heretofore come within our knowledge. The principle on which it is constructed, appears to us to be equally just and original; and the very gratifying success which has attended its application, abundantly confirms the soundness of the theoretical principles by which it was suggested. For the purpose of rendering the improvements in the truss of Dr. H. intelligent to our readers, we shall make a few extracts from his pamphlet.

“The qualities we have united in the Truss, are equally applicable to every species of Hernia, and we can say, without the fear of contradiction, that the proportion of cures it has effected is altogether unparalleled. It may, perhaps, be an interesting inquiry to some, how this instrument produces its effects; and we think, after considering its construction, this question can be answered to the satisfaction of every rational mind. It will be observed, that this Truss presents a concave surface to the rupture opening. The concavity of the plate is occupied by an elastic cushion, the resistance of which is sufficient to reduce the protruding intestine while it is prevented escaping to any considerable distance by the pressure of the metallic plate; which pressure, being greatest at the circumference and diminishing toward the centre, tends constantly to approximate the hernial parietes, and afford them rest and mechanical support. It is therefore obvious that nothing is suffered to intervene between the lips of the opening, as is the case when the intestine protrudes, or a convex pad is applied, but a fair opportunity is presented for the fibres to recover their tone, or to heal, when any laceration has been produced by violence done to the parts. It is a law of the animal economy, particularly noticed by Dorsey, that all hollow parts of the body have a tendency to adapt themselves to their contents.

"For the cure of Hernia then, it is only necessary to remove every obstacle which counteracts this tendency. This indication is certainly very far from being answered by the convex pad, and we think it can only be fulfilled by one which shall reduce the bowel without dilating the ring; with this view, we have applied the concave pad, which has more than answered our expectations, in preventing a descent of the gut, and in restoring the fibres, which it undoubtedly greatly facilitates by its constant and uniform pressure. But without investigating the *modus operandi*, it is sufficient for the patient, and for all practical purposes, for the physician to know, that with this instrument Hernia may always be secured. If applied in cases of umbilical or congenital Hernia in children, it will, in every instance, remove the necessity of an operation. In cases of congenital Hernia, it should be applied before adhesion takes place, but not until the testicle has made its descent. If this particular period should be more carefully observed by surgeons, and the application of the Truss, (instead of being abandoned to mechanics) receive a greater share of their attention, they might be instrumental in obviating much of the distress which has been entailed upon the world."

The distinctive merits of this Truss Dr. Hull sums up under the following heads:—

"*Firstly.*—The concave internal surface of the rupture pad, from its pressure being greatest at the circumference, tends constantly to approximate the hernial parietes, affording them rest and mechanical support.

"*Secondly.*—The combined hinge and pivot mode of connexion between the *spring* and *pad*, by means of a tenon and mortice so constructed as to preserve a double hinge and limited joint, acting in every direction, thereby securing the uniform pressure of the spring on the pad, and sustaining the same nice coaptation of the pad and rupture opening, as well under the varied ordinary desultory muscular actions, as when the body is in a recumbent posture.

" *Thirdly.*—The graduating power and fixture of the pad to the spring, rendering, as will be readily perceived, the position of the pad perfectly controllable, even to nameless minuteness. Also resulting from this mechanism, is the advantage of accommodating a large truss to a small person; hence the *facility of supplying, without disappointment, persons at a great distance.*

" *Fourthly.*—The Double Inguinal Truss; being simply the addition of another pad, attached to a short elastic metallic plate; this plate with its pad move on the main spring by the same power of adjustment and fixture as the first pad, the pressure of the pads being graduated at pleasure by an intervening cork wedge."

The following interesting fact illustrative of the success of the truss is recorded by Dr. Hull:—

" It is a fact well known to the profession in the county of Oneida, and has been a subject of congratulation in their Medical Society, where the Truss was invented and first brought into use, that from the year 1800 to 1819, from three to five persons were annually the subjects of operations from strangulated Hernia: and that from the year 1819 to 1822, not a single case had occurred within the knowledge of any individual member of the society. This surprising alteration was attributed, solely, to the general use of the instrument now under consideration."

Explanation of the plate:—

" H—represents the umbilical truss;

" A—the situation of the rupture pad in umbilical Hernia, resting with its centre directly over the rupture opening. The spring of the pad passes close to the side, as represented by the plate.

" D—represents the situation of the back pad upon the centre of the spine in corpulent persons, but a little beyond on spare or emaciated.[*]

" I—is a representation of the Double Truss, when upon the body the principal part of the pressure is made upon the end pad, C; that should therefore be applied to the worst rupture. The degree of pressure upon the second pad, B, is regulated by a cork wedge, which is made to slide between the main spring, and small spring, to which the second pad is attached. The application of this Truss is represented by the letters K B C. The back pad resting upon the sacrum, as shown by the letter E. The rupture pads should apply immediately over the rupture opening, the lower edge just touching the edge of the pubis. The spring should pass in a horizontal line, and be neither so large as to be inconvenient, or so small as to press upon any part of the body. The force of the spring should be sufficient to keep the gut always reduced. The greater pressure the patient can bear, the more perfect is his security, and the greater the prospect of radical cure.

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[*] Except in cases where the greatest pressure is required, the counter pad should be made to rest on the muscular cushion on each side of the spine.

"G—represents the single Ing. Truss; it differs in no respect from the double, without the addition of the second pad. If the rupture be in the right groin, this Truss comes on from the left side, as represented by K. And the same Truss reversed for a rupture in the left groin.

"Fig. F—represents the instrument as applied in femoral Hernia. The curve in the spring at F, is for the purpose of dropping the rupture pad lower in the groin, while the back pad retains the position E. In these cases it will be generally found necessary to turn up a little the upper and lower edge of the pad to prevent its chafing the integuments of the abdomen and thigh.

"If proper attention is paid, it will be difficult to mistake the application of this instrument. The one first applied may not be the best adapted, but the opportunity afforded of trying the several degrees of pressure will at least secure the rupture, if it does not go to the extent of cure."

NOTICES.

UNIVERSITY OF THE STATE OF NEW-YORK.

College of Physicians and Surgeons of New-York. New-York, September 15, 1825.—The Trustees of the College of Physicians and Surgeons of New-York announce to the public that the usual Courses of Lectures will be delivered this Winter in the College in Barclay-street. The Introductory Lectures will commence on the first Monday in November next. The charge for a full Course of Lectures is $100. The matriculation ticket, to be paid for every year during the Student's attendance, is $5.

In conformity with the laws of the State, and the ordinances of the Regents of the University, it will be expected of every Candidate for the Doctorate, that he shall have arrived at the age of twenty-one years—that he shall have studied medicine for three years with some regular practitioner—and that he shall have attended two full courses of lectures in some respectable medical school. The Trustees will feel it to be their duty to exact in every instance, the most rigid compliance with these positive enactments of the Legislature and the Regents.

Appointed as the immediate guardians of this Institution, the Trustees assure the public that no exertions shall be wanting on their part, to place it, in point of advantages, on a perfect equality with the most favoured medical schools in our country.

The Trustees take occasion also to state, that during the present year, they have laid before the Regents such representations concerning the financial and other concerns of the College, as they trust will induce that body to adopt efficient measures for relieving the Institution from those embarrassments which have hitherto impeded its progress. The decision of the Regents will be made next Winter, during the session of the Legislature. The following is the Course of Lectures:

Dr. Hosack, on the Theory and Practice of Physic and Clinical Medicine. Dr. Macneven, on Chemistry. Dr. Mitchill, on Botany and Materia Medica. Dr. Post, on Anatomy. Dr. Mott, on Surgery. Dr. Francis, on Obstetrics.

It may be proper to observe that the above is issued by the only legitimate authority of the College. which forbears at present to enter into any public explanation respecting the character of a certain publication which has recently appeared under the signatures of the Professsors.

By order of the Board of Trustees,
JOHN D. JAQUES, M. D. President pro temp.
WM. HAMERSLEY, M. D. Register pro temp.

UNIVERSITY OF THE STATE OF NEW-YORK.

College of Physicians and Surgeons of the Western District at Fairfield, Herkimer County.—The lectures at this Institution will commence on the first Tuesday in October next, and continue during the space of sixteen weeks.

Joseph White, M. D. on Surgery. Westel Willoughby, on Obstetrics. James Hadley, M. D. on Chemistry and Materia Medica. James Mc Naughton, M. D. on anatomy and Physiology. T. Romeyn Beck, M. D on the practice of Physic and Medical Jurisprudence.

Fee for the whole course of lectures $54. Board may be had from $1,25 to 1,75 per week. By order

JAMES HADLEY, M. D. Register.

Institution for Medical Examinations and Lectures.—The course of medical examinations on the lectures delivered in the college, will commence on the first Monday in November, at the opening of the College of Physicians and Surgeons in this city. The plan which is now proposed to the students of medicine, has been matured for several years, and experience has proved the great advantage of regular and minute examinations on the various subjects taught in the college; these examinations are rendered more interesting and instructive by illustrations afforded by a numerous collection of preparations, specimens, and apparatus, &c. To promote still farther the objects proposed, two gentlemen have been associated to conduct two of the departments, through whose means additional facilities will be afforded, and important additions made to the materials for illustrating their different branches.

The subjects will be taken up in the following order, at 7 o'clock P. M.

Monday, *Therapeutics and Materia Medica,*	Dr. J. S. Rogers.
Tuesday, *Anatomy,*	— Pendleton,
Wednesday, *Surgery,*	— F. G. King.
Thursday, *Chemistry,*	— J. S. Rogers.
Friday, *Obstetrics,*	— Pendleton.
Saturday, *Theory and Practice of Medicine,*	— Hoffman.

Lectures on Anatomy.—Dr. J. Kearney Rodgers will deliver a course of lectures on anatomy during the ensuing winter. The course will commence early in November, and continue for sixteen weeks. As the end of this branch of medical education is its application to practice, it will be the constant endeavour of Dr. Rodgers to bear in mind its connexion with medicine, obstetrics, and surgery. The lectures will be delivered five times a week from 11 to 12 A. M. Fee for the course, 10 dollars.

Lectures on Diseases of the Eye.—Dr. Delafield will commence his course of lectures on diseases of the eye during the first week in November next. A lecture will be given every Wednesday and Saturday at 4 o'clock P. M., at the New-York Eye Infirmary.—Fee for the course, 10 dollars.

State Medical License.—Candidates wishing to obtain licenses to practise Medicine and Surgery, are informed, that the Censors of the State Medical Society for the Southern District will hold their examinations in the city of New-York. They are requested to apply to either of the censors.

FELIX PASCALIS, M. D.
CHARLES DRAKE, M. D. } Censors.
JOHN B. BECK, M. D.

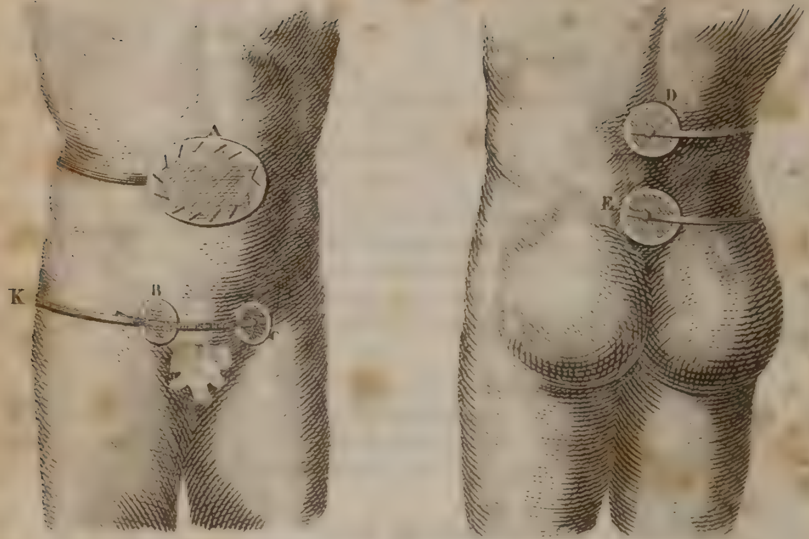
TO READERS AND CORRESPONDENTS.

The press of matter in the present number, which it will be perceived is considerably increased in size, has been so great as necessarily to exclude several articles on hand. They shall appear in our next.

For the paper of Dr. Kirckhoff, we are indebted to the politeness of Dr. Jeremiah Van Rensselaer of this city, to whom it was communicated by the learned author.

Erratum.

Page 415, line sixth from botton, for *unsuccessful* read *successful*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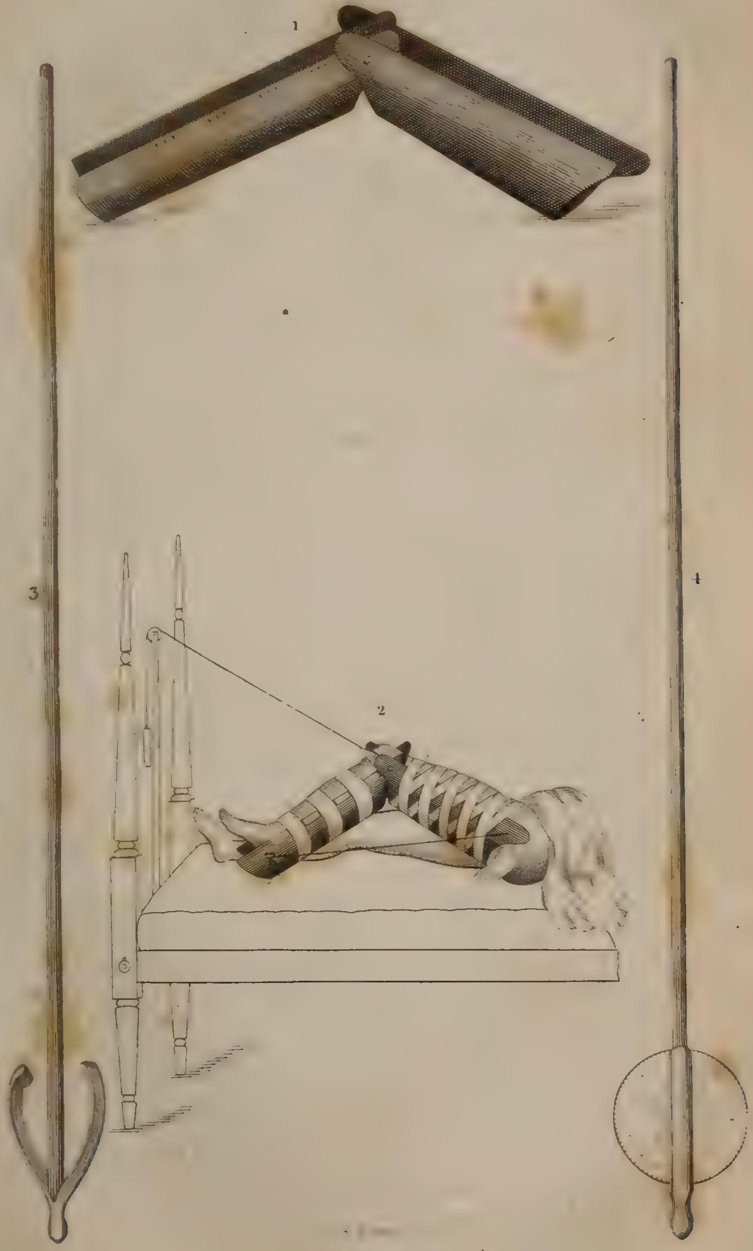

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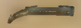

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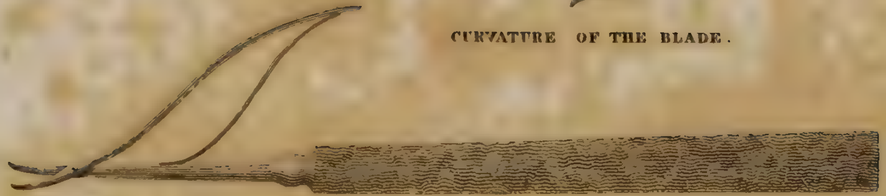

HILLS'S SCISSARS FOR ARTIFICIAL PUPIL.

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NEW-YORK
MEDICAL AND PHYSICAL
JOURNAL.

Vol. IV.] OCTOBER, NOVEMBER, AND DECEMBER, 1825. [No. IV.

Art. I. *A Dissertation on the Question, "To what extent has the Vaccine Disease been found to be a preventive of Small-pox?"* By John Bell, M.D. of New-York.

[This Dissertation obtained the Boylston Prize for the year 1825.]

The importance of this question is evident from the fact that for centuries the small-pox destroyed more than one-tenth of the whole human race;* left deep and indelible marks on nearly all those subjected to it who escaped death, and kept the remainder in a state of perpetual apprehension; and which, notwithstanding the security conferred by inoculation and vaccination, has recently formed no inconsiderable item in our bills of mortality. This question possesses an additional interest and importance in another point of view. Soon after the discovery of vaccination, the most complete credence was given to the absolute and perfect preservative powers of this mild and safe disease against the small-pox.

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* "By undoubted records it may be shown, that in the course of one century no less than 4,500,000 persons have, in the United Kingdoms, perished by this fell scourge."—*Alex. Monro, on Small-pox, &c.* Edin. 1818.

Until within a few years, it was deemed a species of medical heresy to question this belief: but doubts gradually arose, gained strength, and were at length brought forward in the shape of unquestionable facts, by men whose judgment and observation were not to be doubted. As one extreme is usually followed by the other, it cannot be looked upon as an unfounded apprehension that an unreasonable scepticism will be the natural result, and that the consequent want of confidence in the kine-pox will be a public injury, by preventing the general diffusion of this mild and invaluable prophylactic.

In examining this question, we shall commence with,

I. A brief sketch of the early history of the small-pox.

II. The course of the disease, its varieties, the names which they have received, and its second appearance in the same individual; then examine

III The question of the identity of small-pox and chicken-pox.

IV. History of the varioloid disease as it has appeared in this country.

V. Vaccination; and, finally, offer

VI. Conclusions drawn from the preceding remarks.

I. *Early history of the small-pox and of inoculation.*

Attempts have been made by various writers, to prove the extreme antiquity of this disease in Hindostan and India:[*] they amount, however, to little more than mere conjecture. The Chinese, as it appears from some Jesuit missionaries formerly resident at Pekin,[†] fix, with a more than Cambrian absurdity of pretension to antiquity, the first date of this disease at the year 1122 before Christ, and assign their country as the spot where it first made its appearance.

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[*] Chais—Essai Apolog. sur la methode de communiquer la petite verole par inoculation. Howell—Inoculation of Small-pox; quoted by Monro, Observations on Small-pox. Edin. 1818.

[†] Pere Entre colles, Lettres Edif. et Curieuses.

The earliest reasonable accounts, however, go no farther back than the beginning of the sixth century. The Greeks and Romans, it is perfectly obvious, were wholly ignorant of this disease. No mention is made of it by any Greek writer; and it is absolutely incredible that authors who have given us such minute and accurate accounts of other diseases, should have neglected one so striking in its symptoms, so fatal in its termination, and one that left such indelible traces of its course, had such a disease existed in their age and country.[*] No more conclusive proof is wanted that the Romans knew nothing of this disease, than the fact that there was no name for it in the Latin tongue, the word *variola* having been used for the first time in A. D. 580, by Marius, Bishop of Avenches.[†] Dr. Mead states, on the authority of an Arabian manuscript in the University of Leyden, that the small-pox was observed for the first time in Arabia in 572, the epoch of the birth of Mahomet.

The first authentic account of this disease was written by Ahron, an Arabian physician, quoted by Rhazes.[‡] His work, written at the commencement of the seventh century, is lost. He states that it was brought into Egypt at the time of the irruption of the Saracens into that country, and that it followed their conquests, successively spreading through Syria, Chaldea, Mesopotamia, and Persia, from whence it traversed the eastern part of Asia, and spread over China, Tartary, &c. In the eighth century the Saracens conquered Spain, France, Sicily, and Naples, and brought this fatal disease in their train. Soon after this period, an accurate account of the small-pox, referred to above, was written by Rhazes, an Arabian, in which he enters into a minute description of its symptoms, course, and treatment. Avicenna and Hali Abbas, likewise Arabians, wrote valuable treatises on this disease in the beginning of the tenth century. Some time in the eleventh century, as Dr. Mead supposes, it first appeared in England, upon the return of the crusaders from the Holy Land. Germany, Poland, Sweden, and all the north of Europe, were soon subjected to it. Its progress farther north was slow, probably in consequence of the low temperature of those countries: it gradually, however, made its way over Russia, Norway, and Lapland, and at a later period reached even Iceland and Greenland.*

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[*] The learned Dr. Mead says it is absurd to suppose that anthrax, phlyctena, and other cutaneous diseases, known to the Greeks under the names of *ανθραξ*, *επινυκτις*, *εξανθηματα*, &c., could have any reference to the small-pox.

[†] The ingenious writer of an article on the small-pox, in the Dictionnaire des Sciences Medicales, says that Pliny, wishing to prove that the gout was a disease new to Italy, thought no other evidence necessary than the mere fact that there was no Latin name for it. The same writer says, that of all the monuments which have come down to us from antiquity, the statues, pictures, medals, &c., none give us indication of the existence of the small-pox; and that of all the descriptions given by the Greek and Latin historians of their countrymen, no one is spoken of as marked by this disease; and farther, that none of the names given on account of some personal peculiarity, as Ovidius *naso*, M. Tullius *Cicero*, Horatius *cocles*, Curius *dentatus*, Lucius *balbus*, have the slightest reference to the marks of the small-pox.

[‡] It is a singular fact, and one mentioned by Dr. Mason Good, (Study of Med., Vol. II. p. 412,) that this physician recommended the cool treatment in this disease, which unfortunately the absurd theories of the humoral pathologists in more modern times compelled to give place to the opposite and too often fatal treatment.

At the time of the discovery of America (1492), the small-pox was wholly unknown on the western continent. It was carried to the island of St. Domingo by the Spaniards in 1517, and under the burning sun of that tropical climate, spread with such rapidity and fatality as to almost depopulate the island. It was some time subsequent to this that it appeared on the main land, where it produced a degree of mortality which is almost incredible. It is computed that in the kingdom of Mexico alone, there died, soon after its introduction, three millions and a half from this destructive disease. It has since repeatedly swept over that immense continent, carrying terror and desolation along with it.

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* Sir G. Mackenzie states, that in the year 1707 the small-pox broke out in Iceland, and proved fatal to 16,000 persons, a fourth part of the whole population; and Crantz informs us that the same disease appeared in Greenland, for the first time, in 1733, and almost depopulated the country.—*Monro, Op. Cit.* p. 65.

"Detharding says, that of 2000 persons who were attacked during the prevalence of this epidemic (1733), only six escaped." *Dict. Med. Scien.* T. 57. p. 39.—This statement appears rather apocryphal, since it has long since been observed that in cold climates, and the winter of warm ones, this disease is much less fatal than under opposite circumstances.

In the beginning of the seventeenth century it appeared in North America, committing its first ravages in Virginia; from whence it gradually travelled west and north, making its first appearance in New England at Boston in 1649. Since that period, every considerable town in North America, from Quebec to New Orleans, has been visited by this fatal disease.

There is no place where the curiosity or cupidity of Europeans have carried them, that it has not in consequence appeared.*

With regard to the inoculation of the small-pox, the epoch of its discovery is undetermined; and whether it was the result of experiment or accident, is unknown. The Chinese, with their usual readiness to lay claim to every improvement or discovery, pretend that it was practised in their country in A. D. 59; but as this date is some five centuries before our earliest probable records of the small-pox, their claim must be considered as inadmissible. There can, however, be no doubt that it originated in the East,* probably in Hindostan, although it claims a high degree of antiquity in Africa,† along the Barbary coast, and in Egypt. Bruce states that inoculation has been practised, from time immemorial, in Nubia, by the negro or Arabia women, and by slaves brought from Dyre and Fegla. It was first performed at Constantinople in 1763, during a peculiarly fatal prevalence of epidemic small-pox in that city. From mothers and nurses, in whose hands this operation was wholly entrusted, Dr. Timoni, a Greek physician graduated at Oxford, then resident at Constantinople, acquired the method, and communicated it to Dr. Woodward of London, in 1713. It seems however to have made no progress in England until 1721, when it was introduced successfully by Lady Mary Wortley Montague, one of whose children had been inoculated a short time previous at Constantinople.

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* Perhaps we ought to cite, as an exception to this remark, Van Diemen's Land, in which, notwithstanding the frequent intercourse with Europe, this disease has never yet appeared, as we learn from a letter by James Scott, R. N., dated Colonial Hospital, Hobart-town, published in the London Med. and Phys. Journal for 1824. p. 521.

The same writer farther remarks, that "the vaccine virus has been introduced from the Isle of France and Sydney, but after passing through one or two patients, has become ineffective; and I strongly suspect that the same observation is good respecting the primary symptoms of the venereal disease, as I have not met with any cases of it but in persons direct from Sydney or the Isle of France."

About this period, we find inoculation supported and practised by Sir Hans Sloane, Maitland, Freind, Mead, and others of equal eminence. The practice did not, however, become general without strong opposition. Ecclesiastical bigotry turned its powerful arms against it; and, absurd as it may seem, a clergyman maintained from a public pulpit, that Job was actually inoculated by the devil!‡—thus giving a greater antiquity to the disease than even that claimed by the Chinese.

Dr. Williams maintains, with what reason it is difficult to say, that inoculation was performed in Wales and the Highlands of Scotland long before its introduction from the East.* Immediately after its successful introduction into England, the attempt was made in this country, at Boston, with success;† from whence it soon spread into the adjacent country, was practised in New-York, New-Jersey, and Pennsylvania, and even as far south as the Carolinas.

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* Shaw (Travels in Barbary and the Levant,) and La Condamine (Mem. sur Inoculation,) support this opinion, and state that it has been long practised in Georgia, Circassia, and Greece.

† Colden (Med. Obs. and Inq., Vol. I. p. 228,) thinks it came originally from this country; and Mungo Park (in his Travels) confirms the opinion of its high antiquity.

‡ Dr. Massey's "Sermon against the practice of Inoculation," (1722,) with the text, So went Satan forth from the presence of the Lord, and smote Job with sore boils from the sole of his foot to the crown of his head. —Job xi. 18.

It was several years after this before its introduction into France. The opposition which it there met may be judged from the fact, that, as late as 1764, the Faculty of Medicine of Paris decided in favour of the innovation by a vote of fifty-two against twenty-six.‡

With regard to the merits of inoculation, there seems to be but one opinion existing among writers of the present day, which is, that though individuals may derive an advantage from the practice, the great mass of the people are sufferers by it; for the indiscriminate practice of inoculation in all places, serves to diffuse the variolous contagion through the atmosphere, and thus by spreading the disease amongst those who, either from ignorance or obstinacy, including a great majority of the people, have neglected it, and thus renders it a greater evil than good.§ Its operation is perfectly aristocratical; the rich and well-informed profit by it, whilst the poor and ignorant are its victims. This was proved to be the case fifty years since, by tables drawn up by Baron Dimsdale; and "we may fairly affirm," says Good, "that the deaths from small-pox since its introduction have increased, in consequence of the more extensive diffusion of variolous contagion, in the proportion of fourteen or fifteen in every hundred."*

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* Philosophical Transactions, Vol. XXXII.

† Boylston's Account of the Small-pox Inoculation in New England, 1726.

‡ Desoteux, Traité Historique et Pratique de l'Inoculation. 8vo. Paris.

§ Mr. Cross, in his History of the Epidemic Small-pox at Norwich in 1819, gives an eloquent account of the misery and distress which arose from the practice of inoculation. "Variolous inoculation was practised on more than four hundred, each of whom thus became a centre of contagion;" and in the whole of the neighbouring country, "itinerant inoculators, irregular practitioners, and old women, introduced and extended the disease to all quarters by inoculation, regardless of the admonitions given them, because the law authorized no direct measures against them." p. 219.

From the year 1726, the period when inoculation became general in Europe, till 1798, the era of the discovery of vaccination, there existed a disposition amongst medical men to disbelieve, or rather to pass over unnoticed, the frequent secondary occurrence of the small-pox. Those who were desirous of introducing the practice of inoculation, felt that this measure would by no means be aided by creating a belief in the danger of a subsequent attack of the disease. Reports of instances of this kind, however, slowly accumulated. Upon the discovery of vaccination, the friends of the innovation immediately instituted a comparison between the severity of the two diseases, and the security which they afforded against a second invasion of the small-pox. In investigating the subject, all the isolated cases were collected together; old writers were examined; and the result of this awakening of public attention to the subject was, that the second appearance of this disease in the same individual, was an incident of no unfrequent occurrence.†

That the inoculation of the small-pox should be prevented by legal interference, is a point perfectly obvious to any one who has properly considered the subject. The evils of the crime, for it should be considered in that light, do not fall upon the individual alone who commits it. The poor, ignorant, and obstinate, the three classes forming no inconsiderable portion of the great mass of society, are the sufferers; and to satisfy the caprice of one individual, a hundred of his fellows are in consequence exposed to the contagion of a loathsome and dangerous disease. The general diffusion of the practice of vaccination had nearly put an end to this mode of scattering the disease, when the appearance of the varioloid disease, by diminishing the confidence in the virtues of the kine-pock, again excited a wish to follow the old method. The attempt, however, has met with the decided disapprobation of those most interested in the public health, and truly we can hardly conceive how it could be otherwise; for, independent of the objections already assigned, it will shortly be shown that the security which it affords is much less than that conferred by vaccination.*

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* Study of Medicine, Vol. II. p. 423.

"But it (small-pox) has no tendency, like vaccination, to extirpate the disease; and from the impossibility of rendering it universal, it has actually been found to add to the general mortality of small-pox, by opening a new source for the diffusion of its virus."—*Report of the National Vaccine Establishment.* London, 1820.

† A late writer upon the subject, gives the following list of modern writers who have recorded cases of the second attack of small-pox: Willan, Kite, Withers, Mills, Adams, Ring, Bryce, Laird, Bateman, Woodville, Moore, Hennen, Ramsay, and Smith. Cases are also to be found in the Reports of the National Vaccination Board, and Edinburgh Review, Vol. IX. p. 62.

II. *Course of the small-pox—its varieties—the names which they hav received—and its second occurrence in the same individual.*

As we shall have occasion, in the progress of this essay, to institute a comparison between this disease in its most common and striking form, and its varieties and modifications, a brief account of its usual symptoms and course are, in consequence, rendered necessary. In these, neither climate nor time seem to have produced any variation. From Cuba to Iceland the course and duration of the small-pox is the same; and the descriptions of Rhazes and Avicenna, made ten centuries since, are as correct as if drawn from the last year's epidemic.

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* "Though small-pox and cow-pox," says Dr. Monro, "may be upon the same footing as preventives of small-pox, yet they are by no means so as preservatives of life; *for there have been a greater number who have died from a second attack of small-pox, than from small-pox after cow-pox.*" —Op. Cit. p. 261.

Its earliest symptoms are usually a slight uneasiness in the region of the stomach, and tenderness upon pressure; pain in the head and back, accompanied by languor, drowsiness, vomiting of bile, and sometimes by purging of the same fluid, and occasionally a disposition to perspire. For the next two days the febrile symptoms continue, with occasional temporary exacerbations. The patient starts frequently in his sleep, grinds his teeth, and has convulsive twitchings about the mouth. On the third day the fever is more acute, the skin is hotter, the throat more dry, the eyes red and glaring, with impatience of light; and there are cramps in the legs and severe pain in the back. On the evening of this day, or on the morning of the fourth, an eruption, consisting of small red points, not unlike flea-bites, appear about the face and breast, gradually extending to the extremities. As soon as the eruption is complete, the febrile symptoms disappear.

These papulæ gradually enlarge, and on the fifth day are surrounded by a red border of about a line in breadth, gradually fading into the natural colour of the skin. They are pitted or depressed in the centre, and contain a small quantity of serum. For the next two or three days these vesicular pimples increase in size, and assume a light straw colour. The eruption is supposed to be at its height on the eighth or ninth day, the pustules being prominent, spherical, and hard. At this time febrile symptoms usually make their appearance, the face, and sometimes the whole head, swells and is painful. The eyelids are puffed up; there is a little soreness of the throat, hoarseness, and a slight degree of salivation. On the tenth or eleventh day the swelling of the face begins to subside, or rather seems to be transferred to the hands and feet, wholly disappearing in a few days. By the twelfth day the pustules burst, and their contents drying up, form a dark coloured scab or crust, or the pustules shrink and dry up without bursting. The scabs usually begin to fall off about the fifteenth or sixteenth day, leaving a depression or pit in the skin, except when the disease is very mild, when deep red coloured spots remain on the spots occupied by the pustules, which soon disappear.

This is the variola discreta of the nosologists, or distinct small-pox, and is the form in which the disease usually appears. In the confluent form the pustules are more numerous, but slightly elevated, and with irregular edges running into each other. In this form there is no subsidence of the fever upon the appearance of the eruption, the disease is more fatal, and in some rare instances the system seems to sink under it, with scarce an opposing effort, all the powers of life being apparently crushed upon the first onset of the disease, and death follows before the eruption has fully appeared.*

The contagion of small-pox is limited to a very short distance, and the disease is considerably modified by age, constitution, and the season of the year. Infants, old persons, and those of cold and phlegmatic temperaments, are least liable to contract the disease, and its course is usually less severe and more rarely fatal. An attack of this disease during pregnancy, almost invariably produces the death of the fœtus. A case is recorded by Dr. Jenner, of a pregnant female who had already been subjected to the small-pox. Abortion was the consequence of the re-exposure to the contagion of this affection, and the fœtus was found distinctly marked with small-pox pustules.

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* A striking instance of this kind occurred in a child, who came under my care during the winter of 1823–4. Alice McCray, aged about three years, was taken on the evening of the 11th March with the usual symptoms of small-pox. I saw her on the 12th; found all her symptoms violent, but not peculiar. A cathartic with a diaphoretic mixture was ordered, and directions were given to keep her moderately cool. On the 13th, I found her in a state of stupor; her face, particularly her lips and eyelids, were much swollen, and her breathing laborious. An infinitely numerous miliary eruption seemed to be trying to force its way through the skin. She died two hours after. I could not find, upon inquiry of the mother and the rest of the family, that any improper treatment had been resorted to; no officious application of heat, or exhibition of stimulating drinks, "to drive out the pox," with the exception of two spoonsful of milk-punch after the stupor had commenced. The cathartic had operated once, and the diaphoretic mixture was regularly administered.

The numerous varieties pointed out by writers upon this disease, founded on slight differences in the appearance of the pustule, such as variola discreta, siliquosa, vesicularis, verrucosa, confluens nigra, sanguinea, corymbosa, petechialis, &c., serve rather to show the care and minuteness with which the disease has been studied, than to indicate any specific differences in which variations in the usual treatment are required.

With regard to the variety which has been called *crystalline*, there is good reason to suppose that this name was generally, if not always, used to designate the small-pox upon its second appearance. It has long since been observed that this disease, modified by a previous attack of the same affection, usually proceeds no farther than the vesicular stage, and that the clear serum escaping from the vesicles and drying on the surface, gives rise to the peculiar, transparent, and hard crusts which have received the appellation horny, or crystalline.* Since the discovery of vaccination, the small-pox, modified by that affection, put on, in many instances, very nearly the same appearance as in the case just mentioned, as we shall show hereafter.

The oldest writers upon the subject speak of the second, and even third appearance of the small-pox in the same individual, as an occurrence by no means rare, and as occasionally proving fatal.† Other writers, before the general introduction of inoculation, make frequent allusions to it, and in a manner which shows that they were far from believing it to possess an absolutely preservative power.* Modern observation confirms this opinion, and, in conjunction with other facts, serves to show that the course of this disease is as fixed and uniform as the laws of nature.

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* In a case of secondary small-pox described by Dr. Bateman, he says, "there were about fifteen spots on the face approaching to the pustular character, some of them *horny* and tuberculated."—*Med. Chirurg. Trans.* Vol. II. p. 33.

"In the milder cases of secondary small-pox, the pimples pass at once from the state of vesicle to that of incrustation."—*Monro*, op. cit. p. 84.

"Dr. Farquharson," as we learn from the same source, "has assured me, that in the course of his extensive practice, he had had occasion to meet with upwards of one hundred cases of it; and he regards the horn-pox, which occurred before the introduction of vaccination, as a kind of small-pox modified by a previous attack of that disease, exactly in the same manner as is now observed after cow-pox."

† Et possibile est quod (variolæ) accidunt bis vel ter.—*Contin Rhazes*, Lib. 18. Cap. 8. Quoted by Burserius, Inst. Pract.

III. *Identity of the modified small-pox and chicken-pox.*

Writers upon the small-pox, till the end of the sixteenth century, spoke frequently of modifications of this disease, mild in their attacks, and but seldom proving fatal. As more attention was turned upon this subject, a multitude of names were adopted to designate these varieties, such as the spurious, dwarf, volatile, lymphatic, crystalline, and bastard.† Though frequent descriptions were given of these varieties, no doubts of their identity with small-pox were raised until the time of Sydenham, who first spoke of them as "adulterine species, which neither belonged to the genuine small-pox, nor prevented it."

Richard Morton, who wrote a few years after Sydenham, first adopted the term chicken-pox from the vulgar, regarding it at the same time as a mild species of small-pox. In 1767, Heberden first described the chicken-pox as a specific, infectious disease, entirely different from the small-pox.‡ Since that period, until recently, writers have quietly followed on in the same track, more ready to warp stubborn facts into a convenient shape, than to doubt the truth of Heberden's theory. About five years since, Dr. Thompson, the eminent professor of surgery at Edinborough, first publicly questioned the soundness of this doctrine, and in support of the identity of the chicken-pox and the varioloid disease, has produced a train of facts and reasoning of the most conclusive kind.*

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* Diemerbroeck (Anat. Corp. Hum.); Du Haen (Ratio Medend.); Van Swieten (Comment. in Boerhaave); and many others.

† In addition to these, numerous other epithets, founded upon caprice or fanciful resemblances, were given in other countries. In Scotland, the terms swine-pox, hives, nerles, and bleb-pox were used; in Cumberland originated the provincial and barbarous name, water-jaggs; in Germany they had the schaafsblattera, or sheep-pox, the steen-pokken, water-pokken, and wind-pokken.

‡ Med. Transactions of the College of Physicians, London. Vol. I.

If this opinion is sound, and we shall proceed to show the grounds upon which it is founded, varicella must be restored to the situation from which it was taken by Heberden, and be again classed among the varieties of small-pox.†

The reasons assigned by writers upon the chicken-pox for a belief in its specific difference from variola, amongst the most able and zealous of whom are Mr. Bryce, Dr. Abercrombie, and M. Fontanelles of Montpelier, may be arranged under eight heads, each of which will be briefly noticed.

1st. The mildness and short duration of the eruptive fever.

Much weight is deservedly placed upon this point, in distinguishing varicella from variola in its most perfect form; but when compared with the modified forms of this last disease, the peculiarity is at once lost. Dr. Thompson remarks—"I have sometimes seen natural small-pox attack with only a very slight degree of eruptive fever, and the vesicular eruption, supposed to be chicken-pox, often ushered in by a severe febrile paroxysm, of from one to three days' continuance."

Moore, who believes in the distinct nature of the two diseases, in speaking of variola in its mild, and varicella in its most violent form, says, "the symptoms and duration of the previous fever in both maladies are nearly the same. And although the fever of the small-pox is generally incomparably more violent than that of the chicken-pox, yet, when the small-pox is mild, and the chicken-pox severe, the reverse is the case, for vomitings and delirium occasionally occur in varicella, and the eruption is sometimes ushered in with convulsions ;"* and further, " in the severe cases of varicella, the eruption is thrown out in successive crops for two or three days, and the fever does not remit in these instances, so early by one or two days at least."

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* Account of the Varioloid Epidemic, &c., with Observations on the identity of Chicken-pox and Modified Small-pox; by John Thompson, M. D. &c.

† Van Swieten, the able commentator on Boerhaave, after describing an epidemic small-pox which occurred in 1735, gives it as his opinion that the contagion of small-pox, when weakened in its virulence, particularly during the decline of epidemics, produces the chicken-pox.

With regard to the varioloid disease, Thompson, Cross, Bent, Pougens,† and other European writers, cite frequent instances in which the eruptive fever was less severe, and of shorter duration than it usually is in cases of varicella.

Repeated instances have come under my care, in which the febrile stage was so slight as not to prevent the patient's attendance on his ordinary business, and where the number of vesicles did not exceed a dozen, and had commenced drying as early as the morning of the third day. Thus, it is obvious, that no distinctive characteristic can be drawn from the length or degree of severity of the eruptive fever.

2ndly. The rapidity with which the vesicles are formed.

It is difficult to bring forward authorities upon this point, because writers have spoken of the filling of the vesicles in small-pox only in general terms, usually fixing upon the first appearance of the vesicle, and the appearance at which the crust or seal begins to form, as the two important epochs, and leaving all the intermediate stages unnoticed. "In a very great number of undoubted cases of modified small-pox," says Dr. Thompson, "the formation of the vesicles has been as rapid, and their covering as transparent as in any cases which I have known considered to be cases of chicken-pox." During the prevalence of the small-pox the last year, but few *strictly vesicular* cases were noticed, and those occurred chiefly in infants. In these instances the

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[*] History and Practice of Vaccination, p. 99.

[†] Petite Verole chez plus de deux cents individus vaccinés, observée a Millan en 1817.

vesicles rose rapidly, burst early, and were covered by a pale straw-coloured crust as early as the third or fourth day.

In the most malignant cases of small-pox, likewise watery vesicles often form with great rapidity between the pustules, and burst upon the slightest pressure, leaving a raw excoriated surface upon the removal of the cuticle. These, however, rarely if ever immediately follow the eruptive fever. Indeed, in all the cases which have fallen under my observation, this symptom has appeared as late as the 11th or 12th day of the disease, and has been invariably followed by a fatal result.

3dly. Greater dimension of the summit than the base of the vesicles.

No conclusion can be correctly drawn from this point, all vesicles varying in this particular according to the degree of distention from the effused fluid. The small-pox often assumes this appearance as well as all its spurious forms and varieties.

4thly. Want of depression in the centre of the vesicle.

As little dependence can be placed upon this symptom, as it is constant only in confluent small-pox. In all the mild and modified forms of this disease, its presence is comparatively rare. Sometimes, however, the depressions occur in all the vesicles, in others, here and there one has this peculiar appearance, but in by far the greater number of cases, no mark of this kind is visible.

5thly. Want of hardness and prominence in the base of the tubercle.

Much dependence is placed upon this point by Dr. Abercrombie, in pointing out the difference between varicella and the horn-pox. "When," says he, "the contents of the vesicles in the small-pox are let out, the parts of the skin which they covered, are found to be correctly on a level with the surrounding integuments, while the same parts in horn-pox are each elevated above the surface of the skin upon a firm tubercular basis." It seems rather curious that Dr. Abercrombie should have fixed upon a symptom as pathognomonic of the chicken-pox, which has heretofore been considered as the mark by which spurious small-pox is to be distinguished from the true. Dr. Heim,* in laying down the diagnostic marks between genuine and spurious small-pox, states expressly that the skin which forms the basis of the pustule in spurious small-pox is never raised, while that which forms the basis in true small-pox is often very remarkably raised, and that these elevations frequently remain even after the scabs have fallen off.

Mr. Cross in his history of the varioloid disease which occurred in Norwich in 1819, in speaking of the small-pox, mentions the existence of "vesicles formed of simple elevations of the cuticle, being often intermixed with the most regular pocks, and small incomplete pocks rising near them, which never present the indented character.

"I have seen," says Professor Thompson, "the tubercular elevations which succeed to vesicles and pustules, occur most frequently in natural small-pox, and sometimes present in eruptions supposed to be those of chicken-pox."

Every one who has observed the disease as it has appeared in this country, if his attention has been turned to this point, will unhesitatingly avow the same opinion.

6thly. The appearance of successive crops of vesicles.

Little need be said on this point, as the earliest writers on the small-pox speak of successive crops of eruptions as a no very rare incident, and it will readily be seen by a reference to the history of the modified small-pox as it has appeared within the last few years, that it is of daily occurrence. In the report of the New-town dispensary at Edinburgh, we find it stated, "that in most of the cases of small-pox which we have lately seen, the eruption has decidedly come out in successive crops." Numerous instances of a similar kind in modified small-pox, will be found in Cross's history of the varioloid disease in Norwich.

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* Horn's Archives for 1809, quoted by Dr. Thompson, p. 202.

7thly. Falling down of the vesicles on letting out the enclosed fluid.

As was stated in speaking of the rapidity with which vesicles are formed in the worst cases of small-pox, they often arise suddenly and are ruptured by the slightest violence, the cuticle falling down in the same way as in varicella, not leaving the slightest prominence on the place which they occupied.

8thly. Uniformity of the eruption in the vaccinated and unvaccinated.

Within the last few years, and since public attention has been more particularly turned to the subject, a certain contagion has been prevalent in almost every part of Europe, and in most of the large cities in this country, which in the unvaccinated has produced what has been on all hands, allowed to be pure small-pox; in a portion of the vaccinated, an affection which has received the name of varioloid disease, and in another portion, what the believers in the specific difference between varicella and variola, believe to be chicken-pox. This fact, conceded by every one, speaks in such clear terms as to need no comment.

Various other points of less importance have been considered as aiding in proving the distinct nature of varicella. One of these is the question whether it can be communicated by inoculation? Some modern writers deny that it can, but on the other hand, we have abundance of testimony that it has frequently been done. Heberden treats it as an established fact; Baron Dimsdale and Willan coincide, and some recent experiments in France show that, although with difficulty, it may be communicated, and that it produces affections varying very much from the original disease.

It is not important, however, to the main question to have this point settled, for allowing that it is still at issue, the balance of proof is overwhelming.

With regard to the general appearance and course of varicella, and any conclusions that might be drawn from observing it as a whole, it will be shown, in speaking of the varioloid disease, that we have a regular gradation, both in severity and in the degree of perfection in which the disease appears, (considering pure small-pox as the standard) from the mildest case of chicken-pox, where scarcely an eruption appears, through all the varieties of common varicella, varioloid disease, benignant small-pox, &c. up to the most marked form of confluent small-pox.

In addition to this, recent observation shows most conclusively, that wherever small-pox makes its appearance, all its spurious progeny from horn-pox to varicella follows in its train, and as the parent disease disappears, its offspring die away. In England, Scotland, France, Wirtemberg, Holland, the West Indies, the island of Ceylon, and in our own country, small-pox, varioloid disease, and chicken-pox have been observed, and recorded without any intention of supporting a particular theory, as co-existent and simultaneous in their disappearance.*

IV. *Small-pox modified by vaccination.*

The discovery of vaccination is too recent, and its history too well known to require a notice in this place. Its value began to be estimated, and its general diffusion commenced in 1798. At this time it was supposed to confer a perfect immunity against the attacks of the small-pox. There can be no doubt, however, that cases of the appearance of this disease after the process of vaccination has been passed through, occurred early after its discovery. These were probably few in number, in consequence of the then limited diffusion of the cow-pox, and were all considered as cases of varicella; the distinct nature of this disease being at that time considered as established by Heberden and the writers who immediately succeeded him. As the diffusion of the vaccine disease became more general, small-pox modified by it, occurred with greater frequency, and cases are to be met with in great numbers in writers upon vaccination and varicella, where there is an evident contest in the author's mind, whether he shall follow the dictates of his own good sense, risk the charge of ignorance and call the disease small-pox, or whether he shall follow the beaten path and consider it varicella of a severe character. Dr. Willan says, that in six years he saw seventy-four cases of chicken-pox, which had been mistaken for small-pox after vaccination.* In the present state of our knowledge of these diseases, no one can doubt that the mistake lay upon the other side, and that probably all these were cases of small-pox modified by vaccination.

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* "There is no satisfactory proof to be found in our medical records, that these two diseases (variola and varicella), have ever prevailed separately, but many proofs of the fact that all the varieties of the genuine, as well as of the spurious sorts of small-pox have, in the same epidemics, come in and gone out together." Thompson, Opt. Cit. p. 139.

The same opinion is expressed by Mr. Black, Ed. Med. and Surg. Jour. No. 58. p. 44.

A spurious small-pox or chicken-pox occurring after vaccination is described in the Journal de Medicine by M. Valentine, as occurring in the department of La Meurthe in France in 1802. A case occurred the same year at Paris, which excited a great deal of curiosity, and drew toward it the attention of Chassieur, Tillet, and other eminent physicians of that capital. No doubt, had the curiosity of the medical profession been turned in that direction, numerous similar instances would have been recorded between this period and the one (about 1816) when public attention first became interested in the subject. Since 1816, the small-pox in its pure form, as well as modified by vaccination, has appeared in Great Britain, France, Germany, Austria, and most countries on the continent.† It is only within the last two or three years that it has appeared in America, but its course has been so uniform both in Europe and this country, that a description of its appearance here may be considered as applicable to any part of the world.

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* On Vaccine Inoculation, by Robert Willan, M.D. &c. 1806, p. 84.

† Mr. Cross in his history of the varioloid epidemic at Norwich, quotes an account of an epidemic small-pox in the kingdom of Wirtemberg in the

We shall first give a general description of the ordinary course of the small-pox modified by vaccination, and then point out its peculiarities and variations, and illustrate them with cases.

The commencement of an attack of the modified disease is similar to that of pure small-pox. There is the same languor, lassitude, headach, pain in the back and limbs, heat and dryness of the skin, quickness of the pulse, sickness at the stomach, vomiting, and even in severe cases cornea and delirium. The febrile stage usually continues about three days; on the fourth, a papular eruption makes its appearance on the face and breast, and gradually spreads over the rest of the surface; the whole number of pustules not ordinarily exceeding two hundred.

As soon as the eruption is complete, the febrile symptoms subside. For the next two days the papulæ gradually increase in size, and on the third, or even earlier, present a small vesicle on the apex, which bursts in the course of the next two days, and forms a thin yellow scab, which falls off soon after. This is the mildest and most frequent form of the disease.

In some cases all these symptoms are more severe; the vesicles, instead of drying upon the fifth day, become pustular, continue nearly as long as pure small-pox, and leave indelible

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years 1814, 15, 16, and 17, collected and arranged by Dr. Elsasser, after an examination of all the official returns of the medical men to the government, by which it appears that precisely similar effects have been produced there as in Great Britain and this country, by the contagion of small-pox acting on the vaccinated.

Similar observations were made in an epidemic small-pox described by Dr. Hodenpyl, as occurring at Rotterdam in 1817 and 18.

marks after them.* On the other hand, instances were not wanting in which the fever was very slight, and the number of pustules very few, not even amounting to a dozen.† In some rare instances the patient suffers from a febrile attack, precisely similar to the one which precedes this disease, and which suddenly subsides at the end of three or four days, without any eruption. These cases occurred in situations where the individuals were exposed to the contagion of either small-pox or the varioloid disease, and under circumstances which justified the conclusion that the affection was produced by that contagion.‡

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* The most violent case of modified small-pox which fell under my observation, occurred in a young gentleman twenty-two years of age, of a plethoric habit, whom I saw, for the first time, on the second day of the disease. His face was flushed, his eyes red, his skin dry and hot, and his pulse 120, hard and full. He was suffering excruciating pains in the loins and head, and was occasionally delirious. I bled him twenty ounces, and gave him a cathartic. His symptoms were slightly mitigated in the evening. On the next morning, an immense number of minute red pimples made their appearance, so numerous as to give his countenance a deep fiery red colour at a little distance. The next day the eruption was complete on his trunk and extremities, and the febrile symptoms began to subside. On the subsequent day, the fifth of the disease, the eruption presented precisely the appearance of confluent small-pox on the eighth day. The next morning his face, particularly his lips and eyelids, were enormously swollen, and many of the papulæ had become vesicular; of these, about one half reached the pustular stage. He recovered rapidly, but is marked by a great number of small pits, deep, but less in diameter than a pin's head. During the disease, the peculiar smell attendant upon small-pox was perceptible in a very marked degree.

† F. I. S. was attacked with the usual symptoms of the small-pox in a mitigated degree. For the first day, notwithstanding the slight chills, headach, and pain in the back, he attended to his ordinary mercantile concerns. For the next two days he kept within-doors, but was able to amuse himself with books and conversation. On the morning of the fourth day, about a dozen papulæ appeared on the forehead and in the edge of the hairy scalp. He returned to his business in the afternoon, and the few papulæ soon after disappeared, only three of them becoming vesicular. In the same house with this gentleman, several fellow-boarders were then and had been sick with the varioloid disease in a far more severe form.

‡ J. B., aged twenty-three years, had been frequently exposed to the contagion of modified and natural small-pox, and had slept in a room ad-

Red blotches, of from one half to three-fourths of an inch in diameter, have, in some instances, preceded the appearance of the papulæ, which in these cases have rarely ever advanced as far as even the vesicular stage, the tubercle, after the second day, gradually diminishing in size till it wholly disappears.* In two cases which came under my care, after the ordinary febrile symptoms, a deep-coloured rash made its appearance on the inferior extremities and the lower part of the trunk, which bore a striking resemblance to the measles, while on the face, breast, and upper extremities an eruption of the varioloid kind was thinly scattered.† Dr. Thompson speaks of cases of nearly the same nature, which he considers as a combination of measles and small-pox after vaccination.

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joining one in which a person lay sick with this disease. He was attacked with all the symptoms of the small-pox, which gradually increased for the next three days. They were so severe as to require pretty active medical treatment, and to induce me to believe that the eruption would be a plentiful one. From the fourth day his symptoms gradually subsided, but no eruption appeared. There were a few irregular, slightly red blotches on the forehead and breast, but not attended by the slightest elevation of the skin, and which the next day had entirely disappeared.

[*] Mary L., aged nine, vaccinated when an infant, was attacked with the usual symptoms of the small-pox in a mild degree. On the third day, about fifty blotches, of a dull red colour, varying in size from that of half a dime to a cent, unattended by any elevation of the skin, made their appearance on different parts of the body. A few hours after, a minute red pimple arose in the centre of each, which gradually increased in size for the next twenty-four hours, retaining always its tubercular character, and slowly disappearing in a few days after. She had never had the measles, which were then prevailing in the neighbourhood, and a slight board partition separated the room in which she slept from her brother, then sick with the small-pox.

[†] John Smith, aged eight years, vaccinated when four years old, but who had never had the measles, was taken with the ordinary symptoms of modified small-pox. On the morning of the third day, an exanthematous eruption, resembling rubeola, appeared on the legs and abdomen, while on the upper part of the body a few varioloid papulæ broke out. None of these ever became vesicular, and at the end of ten days had disappeared. The rash was not visible after the fourth day.

Numerous cases in illustration of these varieties, out of more than a hundred, occurring in a charitable establishment under my charge, and of a great number of which notes were taken at the bed-side, might be adduced; but the numerous recent publications in Great Britain, and the multiplicity of papers upon the subject in our medical journals, render it unnecessary.

With regard to the identity of the small-pox and what has been called the varioloid disease, the question seems so firmly settled in the minds of the medical public, that it may possibly seem a work of supererogation to detail the following experiments, and the interesting case which follows, communicated to me by my friend Dr. Bogert.

A quantity of lymph was taken on the point of a lancet from a patient suffering under small-pox after vaccination, on the third day of the eruption and fifth of the disease, and inserted in the arm of a healthy child of seven years of age, who had neither been vaccinated nor inoculated. Three days after, the point where it was inserted became red and inflamed; a small pustule followed, which contained a fluid on the eighth day. At this time the child sickened, and was confined to its bed. The next day about thirty pustules appeared on its body and extremities. But five of these pustules matturated: the rest gradually disappeared, and were entirely gone by the time the others were scabbed over. This child was afterwards inoculated with the small-pox without taking the disease. In the second experiment on a child similarly unprotected, lymph of the same kind, from another patient, was inserted in the arm, and about two inches below the first puncture she was inoculated with vaccine virus. Two pustules formed, which advanced with about equal rapidity; the varioloid one being a little the largest, and encircled with the broadest areola. On the eighth day they both contained lymph, which soon became purulent. The child at this time had considerable fever, and kept her bed. The next day, about a dozen tubercular eruptions appeared on her back and legs, none of which ever suppurated. Three days after, they had almost wholly disappeared. The patient was afterwards vaccinated, with no other effect than the production of a slight irritation, which lasted two or three days.

The interesting case alluded to above, occurred in a young woman twenty-two years of age, who was vaccinated when a child. She was attacked with the usual symptoms of modified small-pox. For the first two days the fever was severe; on the third an eruption appeared, amounting to about a hundred pustules, on the whole surface. They soon after became vesicular, then horny, or crystalline, and soon after disappeared. Six weeks after, she was delivered of a dead male infant of five months, covered with a marked small-pox eruption. The pocks, which in number exceeded a hundred, were elevated, flat on the top, and from one-eighth to one-fourth of an inch in diameter, and uniformly had a depression in the centre. This fœtus, still in the possession of Dr. Bogert, has been seen and examined by several medical men, who have unanimously pronounced it a case of pure small-pox, apparently at the third or fourth day of the eruption.

With regard to the mortality of small-pox modified by vaccination, European writers all coincide in opinion that it almost never endangers life; and in this country not a single case is on record, nor can I learn from any of the physicians of the four large cities, where it has been most prevalent, that it has, in any instance, proved fatal.

This fact alone speaks volumes in favour of vaccination, and should put to silence and shame the few who, from obliquity of judgment, or a desire of notoriety, have attempted to vilify and abuse it.*

V. *Vaccination.*

The discovery of vaccination—the difficulties which it encountered upon its first introduction—the munificent reward given by the British government to its discoverer—its final victory over prejudice and illiberality, and its general diffusion throughout the civilized world,—are circumstances well known, not to medical men alone, but to all who feel an interest in the general welfare of mankind.

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* See Edinburgh Medical and Surgical Journal, No. LVIII., "On the present state of Vaccination;" by Thomas Brown, Surgeon, Musselburgh.

To eulogize this valuable discovery, would be to repeat what has been said of it by every reasonable man who has written upon the subject. Its highest praise is the mere mention of the fact that it has wholly eradicated the small-pox from some countries,* and in all where it has been introduced, has proved a safeguard against its fatal effects.

The present intention is not to enter into the history or nature of this affection, but merely to speak of the probable advantages of thoroughly subjecting the system to its influence.

Dr. Jenner, who probably observed the cow-pox with more interest and attention than any other individual, says that "the constitution loses its susceptibility to small-pox contagion, and its capability of producing the disease in its perfect and ordinary state, in proportion to the *degree of perfection* which the vaccine pustule has put on in its progress, and that the small-pox, if taken subsequently, is modified accordingly."

Although, from the nature of the case, it is impossible to demonstrate the truth of the opinion, that repeated vaccination offers the only method of attaining the end desired by Jenner, reason and the following experiments certainly speak in its favour.

Several individuals were vaccinated in the ordinary mode, and with the usual effect. Soon after, the operation was repeated; a tubercle arose, which produced a degree of soreness which lasted five or six days. A third repetition was followed by inflammation to a less extent; the fourth, still less; and the fifth produced no other effect than would have arisen from the punctures alone, had no virus been inserted.

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* This was said to be the case in Austria, Denmark, the Isle of Guernsey, the Circle of Rezat in Bavaria, &c.

The same course was pursued several times, and the result was in all instances nearly the same.

Extensive experiment is requisite to determine the truth of this opinion, while the respectability of its origin, and the probability which it bears on its face, should induce those interested to turn their attention to it. The mode proposed by Mr. Bryce is certainly the best now in use; and the process we have just spoken of, may follow it with probable advantage, and at all events without risk.

With regard to the general value of vaccination, the evidence of the most modern medical writers, as Dr. Alexander Monro, Mr. Hennen, Dr. Thompson, Mr. Cross, the late Reports of the London Vaccine Board, &c.; in fine, of every respectable European or American writer, goes to show that their confidence in the power which the cow-pox possesses over the fatal effects of small-pox, is undiminished, and they strenuously recommend its prompt and general diffusion.

VI. *Conclusions.*

1. Small-pox proves fatal in about one in five cases, when contracted naturally.

2. The eruptive diseases known under the names of sheep-pox, swine-pox, water-pox, wind-pox, horn-pox, &c., are all varieties of small-pox, produced by atmospheric influence, constitutional peculiarities, or some other unknown causes.

3. Varicella, or chicken-pox, formerly regarded as a variety of small-pox, but since the year 1767 considered a distinct disease, must be again restored to its former situation, and classed with the varieties just mentioned.

4. Small-pox is modified in three several ways: 1st, by a previous occurrence of the same disease; 2d, by inoculation; and, 3d, by vaccination.

5. Though it is difficult to form even a tolerably accurate estimate of the degree of protection which the first of these cases offers, from the want of sufficiently extensive data, yet it is evident from those which we have, that though cases of

this kind are more rare, they have proved more fatal than those succeeding inoculation.

6. Small-pox, communicated by inoculation under favourable circumstances and in a proper manner, does not prove fatal in more than one in three hundred cases, though its former mortality was much greater.

7. Inoculation should be discouraged in every manner possible, since its performance serves to keep up and diffuse the small-pox amongst those who, from ignorance or negligence, possess no protection against it.

8. Vaccination furnishes, in a great proportion of cases, a complete and perfect immunity against the attacks of small-pox.

9. It modifies the access of small-pox in a slight degree, usually rendering the febrile stage somewhat milder, although the stomach and respiratory organs are often more strongly affected than in its ordinary course.

10. It possesses a controlling power over the progress of inflammation in the eruption, shortens its course, in the majority of cases, prevents its reaching the pustular stage, and in almost every instance obviates the occurrence of secondary fever.

11. The varioloid disease, or small-pox after vaccination, does not endanger life; there being no case on record in which it has proved fatal, after the system has been thoroughly subjected to the influence of the cow-pox.

12. That reason and probability are highly in favour of the truth of Dr. Jenner's opinion, that the security which vaccination offers is in a direct proportion to the degree of perfection of the vaccine process; and that in consequence, it is advisable to re-vaccinate as long as any effect is produced.

13. The vaccine virus, which has now been employed upwards of twenty years, in every civilized part of the globe, has suffered no deterioration; and it now confers all the security against the small-pox which it ever has done.

14. There are no grounds for believing that time weakens, in any degree, the protection which an individual receives from having been once properly vaccinated.

15. It cannot be considered otherwise than the duty, not only of all medical men, but of the public authorities and all interested in the public health, to encourage, as far as is practicable, the practice of vaccination.

ART. II. *On the Proximate Cause of Hydrocephalus Internus.* By JOHN STEARNS, M. D. of New-York.

DISCREPANCE of opinion on physiological subjects, is always proportioned to the difficulty of demonstrating the functions of the organ we attempt to investigate. Perhaps no part of the human body so perfectly eludes our research into its minute operations, as the brain. It is not, therefore, singular that the proximate cause of hydrocephalus internus should be liable to very different explanations. Drs. Beddoes, Armstrong, and others, refer it to that high state of inflammation denominated phrenitis; Drs. Quin, Rush, and others, to that diminished state denominated phrenicula, chronic, or asthenic inflammation; others, to a state of debility in the lymphatics; while others assert, with equal assurance, that it may occur under all these various and even opposite conditions of this organ. The incongruity of the last theory with the real truth, must be too obvious to all who believe in that maxim in physics, "that like causes produce like effects," to require any serious refutation. A few moments' consideration will therefore be exclusively devoted to the others. In this investigation it is important to substitute accurate observation of the symptoms and phenomena as they actually occur, for prejudice, pre-conceived theories, and the opinions of others.

As the lymphatic system is every where subjected to the operation of the same laws, a reference to its condition in the hydropic affections of other cavities will enable us to arrive at some just conclusion upon this subject. Do we discover in these, any evidence of local or general inflammation necessarily connected with the inception of dropsy, or that degree of excitement which we find in ordinary phlegmasia? The diminished temperature, the pallid aspect of the skin, the œdematous condition of the parts diseased, the low intermittent pulse, and a variety of other symptoms of debility, present a negative answer to this inquiry. I am, at the same time, aware that high febrile action does sometimes supervene to the primary symptoms of dropsy: but this is no greater indication of inflammation than the re-action of a common intermittent induced by nature to remove a debility in the external lymphatics, as this has been to remove a similar debility in the lymphatics of the internal cavities. By pursuing this analogy between the external and internal lymphatics, we shall be enabled to acquire more correct notions of the hydropic affections of the latter. The same remarks applied to the brain, will prepare us to consider *a debility in the lymphatic vessels of the ventricles of that organ as being the real proximate cause of hydrocephalus internus.*

Although this theory is at variance with some high authorities in medicine, I cannot yield my conviction that it is founded upon the immutable basis of truth. It is presumed that the turgid state of the vessels sometimes exhibited on dissection, and adduced as evidence of inflammation, is simply an accumulation of blood in the veins, arising from local obstruction, or inability in those vessels to continue the circulation. If the arteries ever exhibit the same appearance, it must arise from some incidental cause not necessarily connected with the disease. Whether this condition of the veins imparts, by sympathy or mechanical pressure, a correspondent affection to the absorbent vessels, or whether the cause of the former produces a simultaneous effect upon the latter, are questions which I shall not undertake to discuss or determine. A reference to the operation of the most commonly exciting cause, may shed some light on this subject. A vast proportion of the cases which I have attended, has been traced to blows and to other injuries upon the head: and I have no doubt that this cause is much more frequent than is generally imagined. Nurses are too much interested to conceal their own carelessness, and too anxious to escape censure to give that candid statement to the physician which would enable him to form a correct opinion of the real cause.

The first and immediate effect of a blow on the head is, according to its violence, a partial or total suspension of the vital powers in the part most sensibly affected; and when the concussion is general, it is accompanied with every symptom of extreme debility. The consequence of this debility in the cerebral vessels, is suspension of the circulation, and accumulation of stagnant fluid. The resistance which this stagnation opposes to the propelling power, excites a more vigorous action, which is increased and perpetuated till the circulation is restored, or the powers of life exhausted by the effort. If this stagnation occur in the veins and lymphatics alone, and the arteries be not proportionably injured, an accumulation of water in the ventricles must be the obvious consequence, thus constituting a true case of hydrocephalus internus: but if the arteries equally participate in the injury, the probable effect will be a case of phrenitis. Aware that phrenitis does not invariably terminate in dropsy, as might be inferred from his theory, Armstrong attempts to explain the failure, by assigning the very extraordinary reason that the former proves fatal before the water has time to accumulate. If all cases of phrenitis proved fatal, it would afford some ground for the admission of this negative proof. But when we reflect that a great proportion do recover, and that in some instances, as I have repeatedly witnessed, the disease is protracted, by repeated relapses, to several months' duration, without producing the least evidence of effusion, we have reason to doubt the truth of a theory so replete with difficulties and so feebly sustained.

I once believed in a similar theory, and was always apprehensive that every protracted case of phrenitis would terminate in effusion. But my repeated disappointments induced doubts, which were at length confirmed into conviction, that this theory is inconsistent, and at variance with the well-known phenomena of the lymphatic system. Instances may however occur, where a local cause applied during the declining stage of protracted inflammation, may so debilitate the lymphatics as to prevent or impair their power of absorption; and such cases have been cited by some authors, to show that inflammation was the cause of the effusion. The same authors express their astonishment when they have been unable to discover the least trace of inflammation in other cases which they had carefully examined. A solitary case of dropsy without its proximate cause, is a medical phenomenon. Such a discovery will lead to the abandonment of proximate causes as useless, or to the adoption of such as are always and invariably connected and co-existent with the disease. The well-known fact, that dissections frequently exhibit cases of hydrocephalus internus without inflammation, is therefore a sufficient reason to abandon this theory. And I trust that a debility of the lymphatic system, accruing from local or general causes, will always be sufficient to explain the various phenomena of this disease, without incurring the disgraceful imputation of deserting its post.

That this cause produces a general hydropic diathesis, no one will hesitate to admit; and that the same principle is applicable to every cavity in the body where water may accumulate, or to the surface, where it is effused in the form of copious sweats, I trust will be equally entitled to credence. What reason, then, can be assigned for exempting the brain from the operation of the same cause, where the same effects are produced, and where the same system of exhalants and absorbents are presumed to exist? To ascribe one operation to the lymphatics of the abdomen, thorax, and skin, and another to the brain, is inconsistent with that beautiful harmony and order which uniformly control the physical operations of the human system, and equally pervade the system of the universe. This theory also acquires additional confirmation from the similitude of symptoms. The same general languor and aversion to motion, the same weak and intermittent pulse, indicate the same state of debility in hydrocephalus, anasarca, ascites, and hydrothorax. The effects produced by the operation of a local cause upon the brain, and the consequences of compression arising from fluid accumulating in the ventricles, constitute the only essential difference.

Some medical writers, impressed with the opinion that a debility of the exhalants will prevent the effusion of water, place the proximate cause exclusively in a torpor of the absorbents; but when we reflect that these vessels, from sympathy and contiguity, are liable to the same morbid affection, there appears no necessity for this discrimination, especially when the phenomena of this disease may be satisfactorily explained by the debility which equally affects both of these classes of vessels. Instead of preventing, a debility of the exhalants actually promotes the effusion of water, while a similar affection of the absorbents suspends their power of action. The *vis a tergo* continues to propel the fluid through the unresisting mouths of the exhalants, in the same manner as copious sweats are effused through the relaxed vessels on the surface. But when in phlegmasia and other diseases of increased action these vessels are too highly excited, effusion is equally restrained in each. This principle explains the phenomena which Dr. Quin deemed so extraordinary in the two cases which he has recorded. "Both," he remarks, "indicated by their symptoms well marked cases of hydrocephalus internus, but when examined by dissection, the blood vessels of the brain were so unusually distended, that the whole cerebrum and cerebellum resembled an anatomical preparation, in which the utmost force of injection had been employed. What is very remarkable in these cases is, that though the symptoms preceding death were so unequivocal, yet to the astonishment of those who were present, and who expected a considerable quantity of water in the cranium, none could be discovered."

If the principles assumed in this essay be correct, the discovery of water in these two cases should have excited as much astonishment, as the want of it did in Dr. Quin and his associates. It has already been noticed that the increased excitement of the exhalants does not increase their effusion, while a similar affection of the absorbents essentialty augments their power of action. Under such circumstances therefore, no water can ever be found in the ventricles of the brain.

Art. III. *Observations on Fractures of the Femur, with an account of a new Splint.* By Nathan Smith, M. D. C. S. M. S. Lond. Prof. of Surgery, &c. in Yale College.

In the treatment of fractures, the first object is to place the extremities of the fractured bone in accurate apposition. In general, this is accomplished without difficulty. It sometimes, however, happens that the muscles are so contused, or otherwise irritated, as to become morbidly rigid, and to resist a considerable degree of force, although the limb be placed in the most favourable position for the reduction. Under these circumstances, it is with some difficulty that the fractured surfaces are brought in contact with each other. If the position of the limb be injudicious in relation to the action of the muscles, or if the force be suddenly and unequally applied, the difficulty is often insuperable. When, however, the contraction has been overcome by the necessary degree of extension, if the fracture is at all oblique, the muscles will repeat the displacement, as soon as the extending force is discontinued; consequently there is indicated the employment of a permanently extending force, a remedy which, from the difficulty that attends the employment of it, and from the want of tact in adjusting it, is exceedingly equivocal in its results, often defeating its own object, with regard to the limb, and occasioning a great deal of suffering to the patient.

The principal difficulty, then, in the treatment of fractures, is not in the manual operation of reducing the bones to their places, but in keeping them acurately there till union can be effected. This difficulty, however, does not altogether consist in the liability of the limb to be shortened by the contraction of the muscles, but also in the tendency which there is to the other kinds of displacement. The limb, below the fracture, may assume such a position, that the axis of the inferior fragment may not coincide with that of the superior, but may make an angle with it; or the limb may rotate, so that the fractured surfaces shall not correspond. This often occurs in fractures of the thigh, from not properly supporting the foot, which, acting transversely upon the axis of the limb, operates like a lever to rotate it. Or, finally, there may be a displacement of the fractured extremities laterally, occasioned by the unequal action of the muscles, or by the limb not being equally supported.

The liability to these kinds of displacement and consequent deformity will depend, in a great measure, upon the length and weight of the limb below the fracture. It is obvious that the greater the length, the more power will the weight of the extremity have to bend the limb, and the less apt will the portion below the fracture be, to accompany the part above in those motions which it is impossible to avoid. The nature of the difficulty, in these cases, should indicate the means which are best calculated to remedy it, and hence it is obvious that the most important indication is to employ such an apparatus as shall command the whole limb, so that the part below the fracture shall preserve its proper range with that above, and in the different motions which may be necessary, that the whole shall move as one, the fragments maintaining their relative position in all respects.

Another important circumstance to be attended to is the attitude of the fractured limb, which should be such that, as much as possible, the antagonizing efforts of the flexor and extensor muscles may be made to balance each other. From the neglect of this circumstance, almost every kind of evil to the limb is liable to occur; the muscles will exert an unequal force laterally, tending to lateral displacement, the contractile force to be overcome must necessarily be greater, the application of the extending force can not be made in the direction of the axis of the broken bone, and in addition to all these, the ease and comfort of the patient, so necessary to the healthy process of union, are greatly impaired.

Another object to be attained, is so to contrive the apparatus that the patient may be moved from place to place, or taken from one bed and laid upon another, without injuring the limb or retarding the cure; for it is no small penalty to be confined on the back for forty or fifty days.

The above are the principal indications to be kept in view. But while we attend to them, there are certain injurious circumstances to be avoided, or obviated, which might frustrate our intentions, or give the patient unnecessary pain and inconvenience. The most important of these is injurious pressure. This is often produced in two ways; and first, by the weight of the limb resting upon a small part of its under surface. This cannot be continued for any length of time, even although it rest upon a cushioned support, without producing injurious effects. The softness of the support is too often a circumstance which deceives the surgeon. A little reflection, however, must convince every one that, if the weight of the limb rest upon an inch square of surface, the effect will be the same whether it rest upon eider-down or adamant, provided the surface of the latter be accurately adapted to that of the limb. To obviate this difficulty and source of injury, the support upon which the limb rests, whatever it may be, should be so adapted to the whole under surface of the limb, as to divide the pressure as equally as possible throughout every part of it. If this be done, it will make no difference whether the support be hard or soft, the benefit of soft substances as an easy support, consisting entirely in their receiving the weight upon a greater surface, and thus dividing the pressure more equally.

The other kind of injurious pressure, which is often, I may even say generally produced upon fractured limbs, is occasioned by the application of splints and bandages immmediately to the neighbourhood of the fracture, with a view to keeping the extremities in place by means of lateral pressure. This occasions injury by the partial contact of the narrow or flat splints bound tightly to the limb, and which, notwithstanding the compresses which are interposed, gall and chafe it in particular places. The circular bandage, by making pressure entirely around the limb, intercepts the returning blood in the veins, and causes the limb to swell below the bandage; or if the limb be equally bandaged throughout, impedes the healing process to which a free circulation is necessary, or irritates the soft parts by pressing them upon the fractured extremities, and not unfrequently, by the inflammation and ulceration which is produced, converts simple fractures into compound.

This kind of pressure is employed from a mistaken notion, which prevails too generally, that such bandaging and partial bracing of the limb contribute much to keep the bone in place. If surgeons, who are in the practice of applying bandages tightly around fractured limbs, would take the trouble to investigate the subject, I think they would perceive that such practice can do nothing but mischief. They cannot be applied sufficiently tight to prevent the shortening of the muscles without interrupting the circulation, and it is doubtful whether *any* degree of tightness would aid in the least, to affect this object; nor can they contribute at all to prevent displacement of the extremities, if the limb below the fracture is moved from its proper position, or if the limb above the fracture is, by the motions of the body, moved out of its relative and natural position. If, in a case of compound fracture, in which the ends of the bone are in sight, or in which they can be touched by the finger, the surgeon will take hold of the limb below the fracture, while he keeps his finger on the fractured ends of the bone; he will find that, by moving the limb into its proper relative situation with the limb above the fracture, the bones will readily come into apposition; but if he attempts to bring the ends of the bones into apposition by pressing them down with his fingers, he will find it utterly impossible to do it, with any force, unless he move the limb below the fracture with the other hand. The weight of the limb is acting against him at the end of a lever which gives it an infinite advantage. For this reason no pressure which the limb can bear without destruction will prevent the ends of the bones from being displaced, if the limb is moved out of its proper position. This mistaken idea of the utility of bandages in maintaining the natural form of the limb, and the necessity of them to attach the splints which are commonly used, has led to an unremitted employment of them, which could not fail to be exceedingly injurious, even were they capable for a time of effecting the objects for which they are intended. It is too generally presumed that, when a fractured limb has been once dressed, or set, as it is vulgarly expressed, it must remain perfectly fixed till the bones have united ; and as it receives its support from the splints which are commonly employed chiefly through the medium of the bandages, there is generally a great unwillingness to relax the support by loosening them ; nor indeed can it be done, as the apparatus is usually applied, without occasioning more or less displacement. There is often, however, a more insidious and much more fatal mischief resulting from this apprehension of relaxing the supports of the limb. The unreasonable fear of unbinding it, thus enveloped as it is in the dressings, for the purpose of noticing its condition, is a timidity which has proved the destruction of many limbs and some lives, and almost always occasions excruciating torment to the patient. It is rare that bandages encircling the limb are not, either at first applied too tightly, or become so, soon after their application, by the swelling of the limb. To the surgeon a part of the dressings may appear sufficiently loose, while by the unequal swelling of the limb, other parts may occasion and conceal a great deal of mischief.

It is unnecessary that I should speak of the great variety of methods which have been employed to maintain the reduction of fractures of the thigh, in order to point out in them the deficiencies which I have spoken of above. Observation and reflection will, as I think, convince every one that the difficulties which I have enumerated are completely obviated by none of them, and that they are for the most part deficient in the general principles which govern their application. I would particularly, however, call the attention of my readers to that which is now used almost exclusively by scientific surgeons, and which, with its modifications, appears to be regarded, though acknowledged very often to fail, as the *ne plus ultra* of inventions for this particular purpose. I mean the method of Desault. This is so familiarly known that I will not attempt to describe it minutely. The principal object which this apparatus is intended to effect, is permanent extension. One long splint is essential to it. This, in the original apparatus of Desault, was a flat piece of wood applied by bandages to the outside of the limb, with compresses intervening, extending above the hip and below the foot. Oblique bands were cast between the thighs and over the extremity of the splint, which thus effected the counter extension, while extension was made by passing bands from the ankle and foot to the lower extremity. Short splints were also bandaged to the thigh, and the whole was closely enveloped in dressings. The patient was of course confined to his back, and the limb was made to rest upon cushions throughout its whole length. The above apparatus has been ingeniously modified by Drs. Physick and Hartshorne. The former gentleman extended the superior extremity of the long splint to the axilla, in the form of a crutch, with a view to relieve the perineum from the galling pressure of the counter-extending band; the latter, by employing two long splints, divided the resistance more equally around the base of the limb.

The first objection, which occurs to every variety of this apparatus, is the attitude of the limb, by which an unequal degree of tension is produced in the flexors and extensors. It is obvious that, when the thigh is extended upon the pelvis, and the leg upon the thigh, all the extensors have their utmost degree of relaxation, while the flexors have a corresponding degree of tension. It is said, indeed, that, although this posture is at first painful to the patient as being unusual, yet, when the extension has been continued for a time, the contraction of the muscles is overcome, and he ceases to complain. This, however, is only an evidence of what mechanica force can effect, and that the muscles, after the extension has been continued for some time, become paralysed, and their sensibility obtunded. It does not prove that the two classes of muscles, which are thus unequally stretched, exert an equal degree of force obliquely upon the bone; for although their vital contractility may be suspended, we know that the contractility of texture increases with the increased degree of extension, so that although the sensations of the patient do not indicate it, yet it is absolutely certain that an effort is constantly making by the muscles to displace laterally the bones to which they are attached. It is obvious also, that a greater degree of force will be necessary to give the limb its natural length, than if the muscles are in harmonious relation with each other.

A little reflection must also convince us that, under these circumstances, it is impossible to make the extension precisely in the direction of the axis of the thigh bone, for the force which is applied to the limb below the fracture, is communicated to the part which is above, wholly through the medium of the muscles, and this will chiefly be done by those which are the móst tense. These will be drawn into the line of direction, in which the force acts, while the bone, not being equally supported on the opposite side, will be crowded from it. The more nearly the muscles antagonise each other, the more nearly will the extension be made in the direction of the axis of the bone, and *vice versa.*

Another objection to this apparatus is, that the support which it receives from beneath, although it rest upon cushions, is, for reasons mentioned above, necessarily confined to a small part of the surface, and must occasion pressure more or less injurious. Another great inconvenience to the limb and to the patient, arises from the support not constituting a part of the apparatus attached to the limb, and consequently not moving with it, in the different unavoidable motions.

The remarks, which were made upon the pressure of flat, straight splints, and circular bandages, are applicable to this method.

The apparatus which I have used for several years past, was designed to answer the general indications of which I have spoken, and was the result of long experience of the difficulties which attend the treatment of fractures generally, and particularly those of the thigh. It consists of two thin broad pieces of wood,* so warped as that the concavity of one shall correspond to the convexity of the under surface of the thigh, and the other to that of the leg. The lower extremity of the thigh piece and the upper extremity of that of the leg, are jointed together. This is done by paring out the margin of each of them, in the middle, so as to make them deeply concave. The projecting corners of the extremities, which are thus produced, are applied to each other, so that those of the thigh piece embrace and overlap those of the leg piece, and each pair being fastened together by a pin, performing the office of a pivot, a perfect hinge is produced, which admits of no other motion but flexion and extension. The superior margin of the thigh piece is then pared away, so as to adapt it to the shape of the pelvis against which its circumference rests. Where it presses upon the pubis and the tuber of the ischium, as it may be made to do, it should be bordered with soft leather, and stuffed. The leg piece is to be made longer and larger than the leg, and as its concavity cannot be exactly adapted to the convexity of the calf of the leg, this part of the limb is to be slung in the splint, by means of strips of cloth, or leather, which pass across it and hang loosely into its concavity, being attached to one side of the splint by tacks, and on the other by hooks or buckles, which will admit of their being tightened or loosened, as may be necessary, without disturbing the limb. The circumference of the thigh piece is to be a little less at the inferior than at the superior extremity, to adapt it to the tapering shape of the limb. A strap, passing from the upper extremity of the thigh piece to the lower extremity of that of the leg, will enable the surgeon to fix it at any angle that he pleases.

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* Bass is that which I have employed, as being more flexible, and less liable to split than almost any other.

In applying it, there may be laid along under the whole splint bands of firm cloth, long enough to embrace the splint and the limb. A broad linen cloth may be laid in the thigh piece. The limb is then to be carefully laid in the splint, the size of the one having been adapted to that of the other by measuring the sound limb; the linen cloth may be folded over the limb, and the whole splint then secured to it by overlapping and pinning the bands along its whole length from the hip to the ankle. As the pieces of the splint are flexible, they will be made by the bands to embrace the limb firmly enough, although they may not have been precisely adapted in size. In most instances, in which the limb has been thus dressed, almost every source of irritation being avoided, and the attitude natural and easy to the muscles, I have not found it necessary to use permanent extension. I am confident that the necessity for its use is often occasioned by the apparatus itself which is employed to effect it. Where, however, the fracture is very oblique, and the muscles are disposed to contract and shorten the limb, I have employed a mode of extension, which can be graduated to any degree of force, and which may always be made in the direction of the axis of the thigh bone. It is accomplished by lacing a soft band of leather round the leg, just below the knee, and to this attaching a cord, which is carried in the direction of the bone over a pully in a stand nailed to the foot of the bed, and which may be lowered or raised at pleasure. To the end of the cord is attached a weight, equal to the necessity of the case. The weight of the body makes the counter-extension, which may be increased, if necessary, by raising a little the foot of the bed.

The reader will readily perceive that, by this apparatus, all the indications which I have spoken of above are intended to be answered. The limb may be placed at any angle, which the muscles may require, without at all disturbing the fracture. It is completely protected from hurtful pressure, as it rests upon the whole surface of its semi-circumference, and as it is no where girt by bandages, being protected from their unequal pressure by the splint, suffering them to touch it only on its upper surface. Along the angles of the splint and bandage, there is no pressure at all, so that the blood returns with perfect freedom. The weight of the leg being perfectly commanded by the lower piece, and the limb easily fixed in any position, its control over the fractured extremities is completely obviated. The splint being light, and the whole of it attached to the limb, and the support being the splint itself, there is no difficulty in removing the whole limb as one, or in transferring the patient from one bed to another. The bandages may be at any time relaxed without the least danger of disturbing the fracture, they being only necessary to secure the limb when it or the body moves. It is to be particularly noticed, as one of the excellencies of this method, that the weight of the limb itself, and the re-action of the hollow splint in which it is lodged, constitute all the force which, under ordinary circumstances, is necessary to maintain the reduction. It is particularly adapted to compound fractures, which may be examined and dressed without in the least disturbing the limb, and even although the wound be on the under surface, by cutting away a portion of the splint opposite to it. The few words which are necessary to describe this splint, are a sufficient evidence of its simplicity, almost any person can construct it in a very short time. The objections of complication and expense, therefore, which prevent the general use of some others, cannot be made to this. I do not, however, rely solely upon the theoretical principles which indicate its use. Its present form is the result of twenty years' extensive experience in the employment of some modification of it, and I never have seen sufficient reason to induce me to abandon it for any other.

ART. IV. *Observations on the Prenanthes Altissima.* By DR. JAMES HUBBLE, of Westchester, New-York.

EMPIRICISM, though pregnant with many evils, has nevertheless been productive of some benefits to the science of medicine. It is by this, that the medicinal powers of many remediate agents have been brought under the control of this ennobling science. It is well known that some of the most important articles of the materia medica were long used as domestic remedies, before they attracted the attention of regular practitioners. In proof of this, we need only refer to the use of *vaccina* among the inhabitants of Dorset and other counties of England, until it was introduced to public attention by the illustrious and philanthropic Jenner. It is therefore incumbent on every one who is anxious for the promotion of medical science, to avail himself of the advantages which occasionally result from empirical practice ; for by this means many important remedies may yet be discovered, and consequently the resources for the relief and mitigation of suffering humanity increased.

With these views, my attention has been directed to a plant, which is universally believed by the inhabitants of certain sections of our country to possess the power of eliminating or counteracting the *virus* produced by the bite of the rattlesnake (*crotalus horridus* of Lin.). This plant I have found to be the *prenanthes altissima* of Linnæus. It is called by the common people, snake-weed, which name it has probably received from its reputed virtues in curing the bite of that animal. I shall content myself with merely giving a botanical description of the plant, and stating some stubborn facts in reference to its medicinal properties, leaving its further investigation to those who may have an opportunity of assaying it by the touchstone of well-conducted experiments.

The prenanthes altissima is a perennial syngenesious plant, of the order polygamia æqualis. *Generic character :* Calyx calycled, cylindric ; receptacle naked, egret simple, flowers from five to twenty, ligulate. *Specific character:* Stem herbaceous, simple, a little spotted, racemes axillary, flowers pendulous, calyx about five-flowered; leaves decurrent on the petiole, angled, denticulate, margin scabrous, radical and lower cauline ones deltoid, with the two lobes at the base projecting a little backwards, middle and upper cauline ones ovate. The flowers are yellowish, and appear in September. The whole plant is lactescent, growing to the height of three or four feet, in a damp and shady soil, mostly along rivulets.

The following, among many other cases that might be adduced, are submitted as proofs of its medicinal efficacy.

G. W. S., aged about fourteen, was bitten by a rattlesnake under the malleolus externus. As the prenanthes could not be immediately obtained, the most excruciating pain, with great swelling and discoloration, supervened, attended with nausea, vomiting of bilious matter, and remarkable prostration of strength. By an external and internal administration of the prenanthes, relief was promptly obtained, with a subsidence of the pain, tumefaction, and discoloration.

J. R., aged about twenty-five, on making an attempt to draw a rattlesnake from a stone wall, was bitten on the outside of the hand, between the thumb and fore-finger. The usual symptoms attending the bite of this venomous reptile began to arise, but were immediately arrested by an opportune application of the prenanthes, applied externally to the wound, and given internally in the form of a strong infusion.

J. O., aged thirty, was bitten by a rattlesnake on the heel, which was soon followed by chills, nausea, vomiting of bilious matter, with great prostration, swelling of the lower extremity, violent pain, and livid spots on the skin. In this case a ligature had been passed around the thigh, in order to prevent the introduction of the *virus* into the system. After the lapse of a few hours, the prenanthes was applied with the happiest effects.

The last case that I shall mention, is that of a dog, which was bitten by a rattlesnake. A few minutes after being bitten, the animal evinced signs of the most excruciating distress. These were inability to walk or stand, moaning, and violent jactitation. The owner, not willing to lose his favourite menial, made an external application of the prenanthes to the bitten part, and compelled him to swallow a portion of the infusion. To his great satisfaction the animal soon rejoined him in the chase, free from every vestige of disease.

These cases I have collected from inhabitants of unquestionable veracity, and are capable of being substantiated in such a manner as to demand credence. Although they are destitute of that minuteness of detail which is expected from a physician in attendance, they are nevertheless sufficient to prove the three following facts:—1st. That a bite was inflicted. 2d. That painful consequences arose. 3d. That these were removed by the prenanthes, uncombined with any other agent.

The mode of administration is simply this: If the bite be recent, an external application of the stalks and leaves bruised together is considered sufficient; but if constitutional symptoms have supervened, in addition to the above external application, a strong infusion of the plant is considered necessary to be taken freely.

In conclusion, I would remark, that so implicitly do the inhabitants of certain sections of our country rely on the virtues of the plant under consideration, that although several instances of the bite of this venomous reptile have occurred, regular practitioners have never been called upon.

From the sensible properties of the plant, we would *a priori* suppose it to be an inefficient article. But these speculations must give way to matters of fact, especially when we consider that ergot, one of the most insipid and inodorous of articles, is nevertheless capable of producing the most violent and irresistible uterine contractions conceivable.

These remarks are offered with a view of introducing the plant to the attention of those who may have an opportunity of further investigating its properties. If it be found to possess the virtues ascribed to it, let them be known, and duly appreciated; but if it be found devoid of these qualities, let it, like many others of ephemeral reputation that have gone before it, be consigned to the abyss of oblivion.

Art. V. *On the Employment of Calomel and Opium in Dysentery.* By Dr. Moore Hoit, of Peekskill, New-York.

None of the articles of the materia medica have occasioned more variance among physicians, than the mercurial preparations generally; and calomel, as standing at the head of the list, has been the most prominent subject for commendation and reproach. Its enemies have been decided in their opposition, and its friends have used it with a degree of caution derogatory to its generous qualities, and in a manner well calculated to furnish its opponents with materials for warfare. But without entering into any discussion respecting the qualities of calomel, it is sufficient for my purpose to know that it may be taken into the stomach with impunity; that it produces no injurious effect upon that organ, or upon the intestinal canal generally; and that when its peculiar effects appear, they are developed in remote parts of the system, and are, in the majority of cases, the consequences of repeated prescription, and not of the quantity administered. These being the "facts in the case," it has always been a matter of surprise to me, that calomel should be estimated an article so dangerous as to render it necessary that its dose should be carefully regulated, and so restrained in quantity, that none of its qualities but those we are most anxious to avoid, should be allowed to manifest themselves. Sometimes it is given in minute doses, for no other reason, that I can discover, but to render febrile irritation more acute; occasionally in a more respectable quantity, but so politely shown through the journey by an officious dose of jalap or rhubarb, that time is not allowed for even a passing salute to the different organs.

For more than five years I have been in the practice of prescribing calomel in large doses, in some of the diseases of the alimentary canal, and "collatitious viscera:" but my design at present is merely to notice the beneficial results that have been witnessed in about twenty well marked cases of dysentery, which have come under my treatment during a period of four years.

Dysentery has not prevailed as an epidemic in my neighbourhood within the time above-mentioned; but although sporadic cases seldom assume the malignancy of the epidemic character, those instances of the disease which I have thought worthy of notice, on account of their successful treatment, have commenced with a cold stage, followed by a hot and sometimes a dry state of the skin, furred tongue, thirst, tormina, tenesmus, and frequent discharges of mucus, and, in most cases, blood. The treatment in these cases has not been much varied; uniform success has encouraged me to make almost uniform prescriptions. In some instances, I have given an emetic of from 20 to 30 grs. of ipecac. alone, and have had no cause to regret it, although I never observed it to give any permanent check to the disease. In some cases apparently demanding it, I have drawn blood; but in every case, I have placed my reliance upon large doses of calomel, or calomel and opium. I was induced to give large doses of calomel in this disease, from the success which had attended the practice in cholera, at a time when I was opposed to the employment of opium during the early stage of dysentery, or until after the administration of cathartics: but experience has convinced me of the error of withholding opium when united with calomel, and still more completely of the injudicious practice of exciting or irritating the inflamed mucous membrane by such articles as are commonly used for that purpose. It cannot be contended that those articles have the least tendency to *change* the state of the local disease; they merely remove from the intestinal cavity the effects, not the cause, of the disease, and this at the expense of increasing the already morbid irritability of the suffering part. The same objection, I am confident, cannot be made by the *practitioner* to the remedy in question. The doses of calomel employed, have varied from 20 to 35 grs., and of dried opium from 1 to 2 grs. This prescription has been repeated according to the violence and pertinacity of the symptoms; slight causes have been entirely removed by one dose, others have required two, three, but never, as I recollect, more than four, generally with an interval between each of from eight to twelve hours. A dose of castor-oil has been invariably directed after the dysenteric symptoms have subsided. In twenty cases, I have never known this practice to fail of effecting a cure, nor salivation to ensue but in one instance.

I offer the following case as a specimen of my practice; for the second, I am indebted to my friend, Dr. James Fountain.

August 7th. 9 o'clock A. M. Called to Mrs. A. V., of a slender habit, and rather predisposed to pulmonic affections; nursing her child of about four months. Found her with considerable prostration of strength; thirst; skin hot and moist; severe tenesmus, and trifling evacuations of mucus; much nausea, but no vomiting. These symptoms were of four or five hours' existence, and had succeeded a diarrhœa of a few days' standing. Prescribed an emetic of ipecac. In the evening, no relief from the dysenteric symptoms. Then prescribed about 20 grs calomel combined with 1 gr. opium; and an enema of starch, to contain iʒ tinct. opii. within two hours, should there not then be effectual relief from the tenesmus.

8th. A. M. During the first part of the night she remained free from pain, and the enema was not administered; but the symptoms had now returned. Prescribed 25 grs. of calomel and 1½ opium.

Evening. Has passed the day free from pain or discharge; likewise an abatement from thirst, &c. Ordered an ounce of castor-oil.

9th. A. M. Discharges of mucus, with some blood; but little pain. Gave 20 grs. of calomel. In the course of this day the dysenteric symptoms subsided entirely. The cathartic operation of the calomel was marked by dejections, consisting almost entirely of the natural secretion of the liver. A slight diarrhœa rather retarded convalescence, as I was informed a few days after, but which readily yielded to nourishing diet, and a moderate quantity of port wine.

CASE II.

J. D., aged sixty-five, of a sanguine temperament, and rather intemperate habit, while coming up the Hudson, slept on the deck of a steam-boat during the greater part of the night of the 12th August. On the 13th he was seized with rigors, succeeded by high excitement, severe griping pain in the bowels, constant tenesmus, with a discharge of blood and slime only. These symptoms continued without any mitigation until the 17th. Having taken no other medicine than a little rhubarb, his tenesmus was constant, and every symptom of *dysentery* was fully manifested. I prescribed immediately six powders, each containing sub. mur. hydr. 25 grs., ipecac. 1½ grs. and opium 2 grs. One of these was to be taken every eight hours. On the 19th, I found him free from every symptom of the disease, debility excepted. The effect of the first dose was an abatement of the pain and tenesmus; after the second, he could rest in bed comfortably. His tenesmus having ceased, he had a copious dejection. His bowels continued free with two motions only in the twenty-four hours. His convalescence was rapid and uninterrupted.

Art. VI. *An account of a New Instrument for making Artificial Pupil and cutting up the Lens.* By John Hills, M.D. of South Carolina.

Had the oculist an instrument which would invariably make an artificial pupil, it unquestionably would be a great desideratum. And if he had also an instrument which would cut up a hard lens into minute portions, and the capsule of soft ones, and thereby obviate the necessity of extraction, it would be of infinite importance in his art. The writer of this article flatters himself that he has discovered an instrument capable of effecting both these purposes: the plan is respectfully submitted to public examination.

Finding the usual instrument (Sir W. Adams's iris knife) for artificial pupil so often fail, and that in all cases, even the most favourable, it was difficult to effect any thing with it, he was induced to invent something which could be used with more facility and success. The instrument under consideration is a species of scissors. Though a great variety of scissors are in use for operating on the eyes, there are none which act precisely on the same principle as these.

They are five inches in length, the blades near half an inch, have four cutting edges, are curved at their points, and very little larger than the common couching needle; they have a long and short handle, and open with a spring, though it is immaterial as to the effect of the instrument, what kind of handles are attached to the blades, those of common scissors answering quite as well. They must be made nearly round at the root, so that they can be turned in the eye with ease.

It is necessary to have three sets of different length of blade, which will answer for eyes of all sizes, make an artificial pupil in any part of the iris, and cut up the hardest lens, unless it be ossified, which is a very rare occurrence.

One of the blades ought to be about $\frac{1}{20}$ of an inch longer than the other, in order to make the puncture with greater ease, though if they be delicately made and in nice coaptation, they can be readily introduced without it, or the puncture may be made with Cheselden's knife, and then the scissors introduced afterwards with great ease. They are to be introduced in the same manner as the couching needle, and then pushed in up to the rivet, so that it may come exactly even with the orifice in the sclerotica (see plate); then it is obvious, constructed as these are, that they may be opened and shut hundreds of times without lacerating or contusing that coat; when thus introduced, the points are turned forward and opened (see plate); the points are then to be brought forward to the iris where it is intended to make the pupil, which is effected by carrying back the handles. Or if the operator chooses, he can pierce the iris with one blade, and then shut them, which will cut all that portion between them. This is effected by carrying the points obliquely upwards or downwards, as the transparent portion of the cornea may be situated, which, of course, is the place for making an opening in the iris. When the iris is very near, or even in contact with the cornea, as is sometimes the case, the operator must hitch the point of one of the blades into it, and turn the point back, and at the same time push it through the iris. When the blade has pierced $\frac{1}{12}$ or $\frac{1}{16}$ of an inch, shut the scissors, and so proceed until the opening is as large as required. This is a very superior advantage which the instrument has over the knife; for being curved, the operator can, after catching it on the point, draw the iris back easy to its natural position, by slightly turning the point back, which is done by turning the instrument in his fingers, and at the same time pierce and cut it. In attempting to do this with the knife, it is very liable to pierce the cornea, and indeed it is generally impracticable to effect any thing; the patient is therefore abandoned to his fate. A regular comparison of the instruments will not be gone through, as it is presumed that the advantages of the one over the other can be seen at a glance, by any one at all conversant with ophthalmic surgery.

The lens is cut up by turning the instrument in various directions, at the same time opening and shutting it, care being taken not to wound the iris. The most proper way, however, to cut up a hard lens, is to introduce the scissors as before directed, and to carry them back to the posterior part and centre of the lens. The points are then to be brought forward and gently introduced into it, after which they must be opened: having cutting edges on their external sides, they will cut their way out; then shut, introduce, and open as before. In this way the hardest lens is easily divided into halves, and these are readily embraced by the blades, and cut into small portions or particles, which may be suffered to remain in situ. A hard lens, therefore, becomes in this way converted into a state analogous to that of a soft one, consequently absorption follows, and extraction is rendered unnecessary.

Art. VII. *Account of a Disease which prevailed in the New-York Penitentiary, during the months of September, October, and November, 1825; in a Letter to the Editors.* By Theodore F. King, House Surgeon to the Penitentiary.

I transmit for publication in your Journal, a brief notice of a disease which has prevailed, during the last three months, in the Penitentiary, and which has appeared to me both novel and interesting, no less from the symptoms which characterized it, than from the cause which is supposed to have produced it. Without presuming to give to it any particular name, I shall briefly detail such facts as may enable you to form a judgment concerning its real character.

The first case that arrested my attention, was that of a girl, who complained of an unusual degree of soreness in one of her legs. On examination, I found on the calf of her right leg a spot about two inches square, discoloured, and exceedingly painful to the touch. Considering it as nothing more than a common bruise, I prescribed some ordinary rubefacient. On the succeeding day, I found that no relief had been obtained; that she had been restless and wakeful all night; and she now complained of pains shooting up the thigh. Opium was given during the day and at night. No sleep was however procured; and on visiting her the next day, she informed me that she had lost entirely the use of that leg. From the singularity of this case, I was now induced to inquire whether any others of the females were similarly affected. On interrogating them, I was answered in the negative; but on examining them, there were observed small purple spots at the root of the nail of the great toe, in some, and in others about the malleolus internus. The number thus affected was sixteen. None of them were conscious of being at all indisposed, and indeed no symptoms of any derangement of the system were present. In a short time they began to complain of pain in the legs, similar to that of the patient already mentioned. Considering it to arise from a torpor of the extreme vessels, owing to their confined life, I prescribed stimulating applications to the part, and directed the following combination to be taken internally, three times a day:

Tinct. cantharides, - gtt. xv.
Tinct. opii, - - gtt. x.
Aq. ammoniæ, - - gtt. xv.

At the same time I permitted them to walk in the yard attached to the Penitentiary. Under this treatment they obtained some ease. The disease, however, was not arrested, and the patient first attacked now began to complain of pains in the stomach and bowels, resembling those of colic. Tincture of opium was freely given, without arresting the pain, until the next morning, when she said that it had entirely left her, and expressed the belief that she was getting well. On the succeeding day she died in convulsions, which lasted about fifteen minutes.

I now directed an examination among the men, eleven of whom I found with similar appearances on their extremities. Alarmed at the progress of the disease, I endeavoured to ascertain what could be the cause producing it: and with this view, learnt from the keeper that the prisoners had been in the constant habit of using rye bread, the grain of which, he informed me, contained a much larger quantity of spurred rye than he had ever seen, but that, as he considered it perfectly innocent, he had not taken the trouble to separate it. As the flour was ground at the tread-mill attached to the Penitentiary, I examined the rye, and found it to contain very large quantities of the ergot. The house had been upon the use of this flour about three or four weeks before the disease made its appearance. From the effects which are known to have been produced by the use of the ergot, I thought it probable that the present cases of disease might safely be attributed to this cause. The use of the flour was accordingly immediately discontinued; and although during the fortnight after this two or three cases occurred, after that it totally disappeared.

The usual course of the disease was as follows:—Small discoloured livid spots first made their appearance on one or both of the lower extremities, generally about the foot, unattended at first by any local pain or uneasiness, or any general indisposition. After an interval of a few days, these spots would become more numerous, and extend up to the knee. They would now become painful, and in some cases the patient would lose entirely the use of the lower extremities. During the whole of the disease, the pulse was feeble, and generally about 100 per minute. The face usually had a peculiar livid appearance, by which the patients could, in many instances, at first sight be recognised. No unusual heat of skin was present; and the tongue was slightly coated, and very flabby. In several cases there was considerable sordes about the mouth, and in two or three hemorrhage from the gums. The bowels were generally regular; in no case was there diarrhœa present. The urine also appeared natural in quantity and quality. The spirits of the patients did not seem at all affected, and their appetites continued good throughout the whole course of the disorder. In all the fatal cases, death was preceded by severe colicky pains in the bowels. The usual duration of the disease was about four weeks. The women and the old people seemed most affected by the disease. Of thirty-two cases, the whole number that occurred, ten proved fatal. The following is the only dissection which was made; for the particulars I am indebted to the House Physician, Dr. James H. Rogers.

The subject, upon examination, presented an unusual deposition of adipose substance upon the inner parietes of the abdomen. The greater epiploon, however, was shrivelled, and very dark. The liver was healthy, and the gall-bladder full of bile. The uropoietic viscera were sound, and the kidneys secreted their due proportion of urine. The intestines were found studded with dark livid spots, which presented themselves in greater abundance upon the larger intestines.

traversing the transverse arch of the colon to its descending portion. The sigmoid flexure and the rectum were studded with one continued series of dots. A portion of the duodenum was likewise diseased. The stomach appeared inflamed, with a discoloration upon the under and larger portion. The pancreas and spleen presented nothing unnatural.

The subject examined was a female; and, from a knowledge of the supposed cause producing its specific action upon the uterus, I was led more particularly to examine that organ. It appeared quite natural, of its ordinary size, and perfectly healthy.

In treating the patients, bark and wine, carbonate of ammonia, and nitrous vinegar, were the remedies principally used. Bark and wine seemed to be the most efficacious. Opium was given as circumstances required, to alleviate pain and procure sleep.

In conclusion, it may be proper to state, that about thirty of the females were at this time affected with fluor albus, which required, for their cure, a long persistence in the use of tonic remedies.

ART. VIII. *Account of a Disease now prevailing at Puerto Cabello, in the Intendancy of Venezuela, Colombia.* By J. H. C. MILLER, M. B. of the Colombian Navy.

MEDICAL reports, and more especially relative to febrile diseases, have been so abundant within the last few years, that it would appear superfluous to add to the number. Of an ordinary fever we have before us instances of almost every morbid process, and every system of cure. The disorder of which I propose to give some account, however, is not merely very destructive, but, I think, presents some new features, some new coincidences in inflammations or fever, as it shall be thought proper to distinguish it, and is therefore entitled to particular notice.

The affection first appeared about the first of September in Venezuela, in the interior. From what I understand, the persons about the mine now opening in the province of Caraboba, first began to be sickly, and soon after many of the Creoles were taken. After some time raging in the interior, scattering cases were discovered in the city of Puerto Cabello. The summer in this Intendancy generally, had been unusually dry till the beginning of the month, when, in the city, a season of several days of rain occurred, giving rise to a sudden change of temperature in the air; this, however, did not last long; two or three weeks of drought succeeded, accompanied by less than usual of the sea breeze. But if this was the cause of the disorder here, what gave rise to it far up the country? I thought proper to mention it. About the middle of this month as I said before, it began in the city among some persons from the interior, who went off directly, and next among the Creoles of Indian blood who resided in the place. But not till the first of October was it noticed much by physicians. About this time several deaths took place, which aroused the public attention. A Spanish gentleman just arrived, and a Major Schofield, died suddenly. A medical gentleman thought proper to raise a report of the disease of which they died, being the yellow fever: this idea, the government party seemed to adopt, for the bodies were ordered out to sea for burial. A great alarm was excited. The disease continued to increase, and bore down all opposition, carrying off all whom it attacked, with the exception of the patients of our practitioner. Thus I have given a history of the commencement of the disease as particularly as I could, for I did not arrive there myself till about the first of November, having been, during the summer, on a cruise on the coast of Europe.

Our crew were uncommonly healthy when we arrived, and yet in one week seven or eight were down with the affection, though of the first cases fortunately none died.

I was now ordered to remain on shore, and know no more of them. Five days after my arrival I was myself taken down by the disease, and confined a week, and only escaped a long confinement by severe handling and mercury, under the judicious hands of Dr. Pidgeon.

I attended several persons, Creoles of the country, and observed a singular uniformity in them all. This I shall hereafter describe. A gentleman from Bogota, in the Intendancy of Granada, died on my hands forty-five hours from his attack; he, six days before, arrived healthy: a servant in the same family died the same day; and an Indian woman two days after, all in the same state.

Mr. George W. Mix, a brother of Lieut. Mix of the U. S. Navy, whom I was called to see in the last stage by his attending physician, Dr. Morrison, was the next marked case of this affection in my hands: he died after five days' sickness, during which time nothing disturbed the progress of the fatality of his disorder: he went off like an automaton, and breathed his last in a slumber, sensible of approaching dissolution.

I shall now proceed to describe the disorder itself, with reference to its diagnostics, as they occurred to me, with the several modes of treatment, and then lay before the reader the hasty dissection of a pointed case, making but few comments on any part of the subject. But, first, I will remark of the general opinion of the disease, that it is nothing but a fever—the Spanish practitioners giving it no more distinctive appellation than merely *calentura* (fever), and the foreign faculty terming it *typhus gravior*. But I think neither proper, from a circumstance I shall hereafter relate.

The patients, then, are primarily affected in two different ways; and, generally speaking, the foreigners and Creoles just arrived from sea, are to be distinguished from the Creoles and foreigners acclimated to the country, and accustomed to Spanish habits. And here I may observe that the disorder, though more violent to the patients, and more inflammatory, is nevertheless less fatal to those of the first class; and this is the more remarkable, as it is directly contrary to all disorders of hot climates, hitherto, that foreigners should escape disorders of the bilious and depraved habits where even the natives suffered.

One association of their symptoms is that of the bilious remittents in the southern part of the United States, varying sometimes by inclining to a nervous state, and sometimes to inflammations of the chylopoietic viscera and the brain. The smaller intestines, in the latter cases, are particularly liable. And in the case of an English sailor, belonging to the schooner Reprisalia, his first state was succeeded by a great degree of atony and loss of excitability; a morbid excitement of a very low order came on, which ended in a vomiting and purging of a passive and at last involuntary kind. He was restless, and sometimes a little wild, but complained of no pain whatever, even in the stomach, when he was discharging every two minutes, one way or the other, his food and medicines perfectly unchanged in quality, with a great quantity of almost putrid blood. This case, I am sure, be the general disorder what it may, is a sister case of Allen's, or in other words, a disorder of the spleen, with a species of erysipelatous inflammation. I almost forgot to mention, that from the change of the disease to a state of debility, medicine took no effect on him, and his bowels could never be wrought on, though the discharges were so frequent without it. In another case (Hicks, acclimated) the first stage lasted two days, and was followed by the loss of all action in the extremities, and yet by morbid sensibility at the stomach: it retained nothing; he had constant retching, and screamed incessantly of pain in the epigastric region. Blisters upon the region of the stomach and upon the inside of the legs, restored the equilibrium in some measure, and carried off his increasing debility; and soon after laxatives, opium, and spts. nitre, perfected his cure.

The second order of the disorder commences without much inflammation, though the patients complain always of violent pains from the beginning, and with a great oppression of spirits. These pains are often seated in the lumbar region, and shooting from thence to the scrobiculus cordis; at other times higher in the spine or scapulæ, fixed or running to the left breast. At one time I observed pain in the region of the liver, and about the shoulder-blades, with other symptoms, which led me to expect an inflammation of that viscus; but I was mistaken, for it terminated as usual in a typhoid debility: and in the case of Allen, I had, at first, pain only in the head, approaching nearly to frenzy. Tounder, an officer on board the Eagle, became absolutely so, and in that state walked overboard and drowned himself. In all cases the pulse is low, yet hard and thready, varying with the degrees of debility at first, and some have from the beginning none at all at the wrist; and even in its hardest, fullest states, there is something in the concurrent diagnosis which teaches us decidedly to avoid the lancet, though I have sometimes ventured myself the experiment of venesection in bringing forward the action of the arterial system; yet I must say, never did it result to my satisfaction. To this I was led by practice several years since, where, in the first stage of synochus, I was enabled to render an insidious, low, hard pulse, full and open by it, and often obviate a succeeding stage of typhus mitior. In the two cases, a want of radical vigor, I think, constitutes the reason of its not always succeeding, which is only to be known by discovering where the mind is impaired; whether the natural motions are vigorous; and above all, whether this character of the pulsation is hard and dead, or thready, and rebounding under the finger. So much for my experience.

Some were gone and past recovery from the beginning; such had soft, relaxed skins, with a disposition to a clammy perspiration. This was the first state of Mr. Tress, brother of Dr. Tress of Philadelphia, who have both died there this autumn of the disorder. He never was in the way of cure from the first moment of his complaining. In other cases, the skins were dry and parched, and the patients thirsty withal; yet after being once briskly evacuated, they came suddenly to the preceding state of debility, so perfectly that you would be perplexed to tell in which of the two ways the patient had become so: and bark, camphor, and wine, with less evacuation of the bowels, did no better; for this practice only preserved the inflammatory stage a little longer, but did not prevent its ultimately supervening. I do not know one instance among the most active cases, where the first stage proved difficult or obstinate; on the contrary, they all ran into a typhoid way, if the term is reconcileable to our sense of the disorder. The muscular structure more especially became flabby and pale; the eyes lost their significancy, and acquired an unmeaning stare; the tongue, in the beginning, clean but chapped, and having a trembling about the edges, which increased as the disease advanced, when, as the debility became predominant, the colour became brown, and was covered with a yellowish white exsiccated mucus; the matter, if any, about the teeth and gums tended to putrescency, and smelt badly; and, if ulcers existed, they took on an ill-conditioned, and, as I would choose to say, an erysipelatous state. If they discharged any blood, as was my own case, and one or two more (by the nostrils), it consisted of bloody water, or serous mixture, rather than the due proportions of healthy blood; though I must say I never paid so much attention as I should have done, had I from the beginning designed to make this communication.

With regard to the various practice adopted by physicians, but little can be said, because nothing afforded any cure except a mercurial course. Yet some—among whom I hope the Creole practitioners make the greatest number—being little versed in the varieties of febrile disease, and inasmuch as the diseases of this class in this region are all much of one order, and never vary greatly from what are called malignant bilious fevers in the United States, and which will generally yield to a purgative and sudorific—I say their practice is uniform, and consists principally of laxatives, as ol. ricin., senna, or neutral salts, ptisans, and diet-drinks. I am not jesting in this description, nor am I prejudiced against the Creole physicians; for in regard to the latter point, their studies are limited, and therefore they cannot be expected to do much, being principally taught at the schools in the country, where the superstition against dissection still prevails in its full extent, and but few of our best books have any translation in Spanish. Besides, the interior of this country is very healthy, there being but few diseases except mild fevers, catarrhs, pleurisies, and peripneumonies. And Puerto Cabello is ordinarily of the same constitution; though the hospitals, the army and navy, are beginning to exhibit some traits of science in a medical way.

Another system of practice is the antiphlogistic one, varied by laying the lancet aside, and laying much stress on purgatives. But this has not been so successful as could be wished. The strength of the patient fails too soon, and the inflammatory stage indicating antiphlogistic measures, is proportionably very short: six or nine hours being all-essential to a cure; and in the more directly typhoid and decided attacks, but few cures are effected where help is not procured in that time from the first complaint.

Thirdly, the mercurial practice. This is the present practice of most of the foreign practitioners in Colombia, as far as I know. Dr. Pidgeon, in the city, was the first who introduced it in its extent, and even now carries it farther than any other; and his success has been astonishing. He has not, to my knowledge, lost any one patient. My aim has been to bring them slightly under its influence, and principally by ung. mercur. rubbed into the region of the liver—as it was my opinion till lately, that the principle of the disease was hepatic. To these I conjoin, as circumstances permit, opium and nitric acid. Of purges I am distrustful, and therefore use after the first, nothing farther laxative than a little oil now and then; and this is my course, especially in those cases disposed to settle on the bowels, and induce there morbid action, as in Smith's (English sailor) case, and some others.

The mercury, unless well advanced before the debility supervenes, cannot be made to take any effect, which is a state hitherto incurable; and the sudden occurrence of the debility frequently renders it very difficult to have this effected. This carried off Mr. Mix. It was forward enough to render him quite easy, but could not be brought to his glands. There seems rather a paradox in the operation of mercury in this disease; for where the tendency of the debility is to produce a morbid action of the first passages, though the previous disorder has been the same as in cases in which it has fallen on other parts, and mercury has effected a perfect cure—yet here it has always with me proved prejudicial. I know not how this can be accounted for, otherwise than by supposing either that in the abraded state of the intestines, the corrosive quality of the medicine produces an ill-conditioned excitement, more injurious to the system of the patient, more than sufficient to counteract its curative tendency as a sialagogue; or, perhaps the action occasioned there, according to the law, that "a greater action will predominate, nor can but one exist in the system at the same time," suspends its tendency to act on the secretory organs. Be the explanation how it may, I have laid down the fact. My anxiety to get Smith under a mercurial influence, I am sure was very injurious to him. Yet this was his *dernier resort.*

I was, on the 18th of November, ordered on board the corvette Bolivar, to proceed to New-York to join one of the new frigates building there. The Bolivar was going out for repairs, and but thirty or thirty-five men were allowed her, which was fortunate for the seamen—for having had all her medicine chest and furniture transferred to the corvette Ceres, she was not permitted to get but five or eight articles to carry her out—which, in case of sickness, was certainly deplorably destitute; and this was the more improper, as it was evident before we left port, that her crew would be very sickly, the disorder having broken out on board, and one died, before we sailed. During the passage, the sick list included about from five to seven daily, of inflammatory disease. They were usually treated with mercurial purges in the commencement, succeeded by neutral salts; the most vigorous, and where the symptoms indicated high arterial action, were let blood, and sometimes I applied the cold salt water bath; others I blistered. Where debility was the leading feature, after the first purge I gave wine freely, and administered the tinc. opii and camphor, applied the warm affusion, and in the case of one sailor, when the symptoms were indicative of a bad prognosis, I gave pills, composed of extract. cinchon. and calomel. I had two or three bad cases of dysentery on the passage, but which not falling within my scope, I pass over.

A man by the name of Allen, was attacked with a chill about nine in the evening, which had run its course, and was about leaving him, when I first saw him: his pulse was full and hard, and his eyes suffused with blood. As he was a vigorous man, and of a hot, sanguine temperament, and had been but a few days ashore in Puerto Cabello, these signs led me to suspect it to be an attack of inflammatory bilious fever, and I left him till the morning. When I called on him at seven, his fever, contrary to my expectations, had not yet any remission; the concomitant symptoms indicated high action, and he complained of insufferable pain in the head. During the day he was purged rapidly, and in the evening took neutral salts and cream of tartar. He was also blooded to the quantity of two pounds. Next morning repeated the laxative, and had cold bath, also blister to the nape of the neck. *Third day*, head easy, but pulse hard, and metastasis of pain to the region of the stomach: blister transferred to that part—drew well, but ineffectual; and powders in mean time of pulvis antim., but no perspiration. *Fourth day*, morning—strength sunk, and his extremities became suddenly cold: directed warm bath, camphor and opium; wine and water was also prescribed, but was soon abandoned, as it would not lie on his stomach. The antimonials were laid aside this morning, and powders of calomel and opium substituted in their place. Pain in the stomach and left side increased very much through the day, during which time he took fifty-two grains of calomel. At eight, saw the expression in his countenance indicative of approaching death; and, except a little warm wine and spts. nitre, ceased to disturb him with medicines. At twelve at night he died in agony. He complained seventy-six or seventy-seven hours.

Dissection. I opened him. My aim was to examine the stomach; for though he never showed distinctive symptoms of gastric inflammation and mortification there, yet so many had gone off in the same manner, from the influence appavently of something operating very rapidly near the organ of digestion, that I concluded a dissection of the stomach would give some explanation of the subject. But, contrary to my expectation, that organ was sound and healthy. It was rather pale, and in one or two places of a purplish hue, as I believe, from the effects of incipient putrefaction—six hours having elapsed since his death. A small quantity of a muddy-coloured fluid was found in the cavity of the organ, which I suppose was composed of the little wine he took an hour before his death, with the contents; for however empty we suppose the stomach, I have always found more or less of a dark and dirty fluid.

I next examined the liver, and smaller intestines. These were sound and firm, except that portion of the former round the ductus communis, where a very small part of it appeared light-coloured and rotten, or rather unusually porous and brittle. The gall-bladder was full of viscid bile.

The spleen was next brought to light. And here I discovered at once the seat of the disease and the cause of death —the greater half of the organ being perfectly mortified, without any involving membrane, black and fœtid. Being somewhat a rare case, I had the curiosity to expose it to Captain Clark, and the officers of the ship who thought proper to examine it, and whose testimony is referred to.

After satisfying myself that the adjoining viscera did not partake of the disorder of the spleen, the examination was closed, for I could learn no more on this point.

To comment on this case is difficult, inasmuch as the use of the affected organ is not known. That the disorder of the spleen is the disease now prevailing in Puerto Cabello, I do not hesitate to believe. Be the attack at first and the collateral diagnostics what they may, the leading symptoms are uniform in all. And perhaps it may throw some light on the use of the viscus when I state, that it must be connected in the process of digestion; for during a disorder of it, it is the most difficult matter imaginable to affect the bowels, having in several cases prescribed repeated doses of medicine without producing that object. The stomach also sympathises deeply in its disease, for if itself were the seat, it could not become more morbidly sensible. This is not mere nervous relation of the parts, but must arise as a direct effect of some action connected with the well-being of the stomach.

It is indeed greatly to be lamented that some practical theory of its use has not been proposed, which could throw some light on the mode of cure; but most assuredly, of sixteen uses, which, within my reading, have been ascribed to it, I look on all of them equally wide of the true one. A knowledge of its real agency, at this time, would also enable us to form some probable notions of the remote cause of the epidemic. But unfortunately, observation from henceforward and analogy are our only guides. In the cure, mercury, empirical as its use is, has hitherto generally wrought wonders, and probably will still continue to do so. Till I have something to teach me better, either from my own observation or that of others, I shall continue to depend greatly on it. In this I trust to something, I think, more than whim—for, as I said before, experience has seemed to favour the practice; and besides the analogy of its efficacy in liver complaints, when considered in connexion with an idea which occurred to me some years ago, and which the intimate relation of the stomach and spleen in this case has greatly strengthened, viz. that the latter secretes a liquor which goes to qualify the juices of the former, and soften its acrid properties,—I say, these circumstances in my doctrines, I think warrant my conclusion in favour of mercurials. I will here hint at an idea which has so far, I believe, been overlooked. The gastric juice in the texture of the organ is far more acrid than that which has laid some time in the cavity; and this has always been ascribed to dilution, though the stomach had been empty for hours, or even days. I recollect to have read a case, some years ago,—but who the author was, I have forgotten,—of cholera, in which not a particle of liquid would the stomach retain for eighteen or twenty hours before death; and on the body being opened, a quantity of mild brown ropy fluid was found in the cavity, yet the operator suffered greatly from the acrid juice of the texture to some small excoriations on one of the joints of his fore-finger, which was inflamed and irritable for some time afterwards. This is merely a vague notion, the practicability of which I do not know—for the manner in which the secretion of the spleen is communicated to the stomach, or the general physiology of this viscus, I have never had leisure to investigate.

More light may be had on this matter before the disorder ceases, in which case I shall endeavour to make another communication on the subject. I shall conclude for the present with suggesting, that the disorder now prevailing in Puerto Cabello is not a fever, but an inflammation of the spleen and digestive organs, which is not able to show itself in its character as an acute disease, from the debility of the patient, and a general febrile disposition of a typhoid character.

ART. IX. *Observations on the Treatment of Cephalitis, or Hydrocephalus Internus.* By DR. WILLIAM HIBBARD, of New-York.

THE treatment of hydrocephalus internus is a subject of much interest to the medical practitioner. It is a disease of frequent occurrence, and when compared with other infantile complaints, proves fatal in a great majority of cases. The laws that govern its approach are but obscurely understood, and its pathology is equally void of satisfactory illustration; its diagnosis also is not only difficult, but often very doubtful—so much so indeed, that the most prominent symptoms of this disease may be, and often are, detected in simple deragement of the bowels, and in the process of teething. Hence this enemy to mankind is often combatted at a disadvantage; and it is not unfrequently the case, that the most alarming symptoms of the disease in question yield to simple evacuating treatment.

In the cure of this formidable disease, however, more energetic means are requisite. The remedies heretofore recommended are various in their kind, and some of them very contradictory in their natures; and the failure of some one of them in producing the desired results, has been followed by the introduction of a different remedy.

Those on which I would place the most reliance, and in the use of which I have had the most success, are simply blood-letting and cathartics. Viewing it as a disease of a high inflammatory character in its commencement, but liable to terminate in effusion, if permitted to progress uncontrolled, I have been led to adopt this simple plan of treatment, and the result has fully answered my expectations.

During the forming stage of the disease, which is evidenced by a listless, sluggish, and inactive state, the bowels obstinately constipated, or occasionally voiding small, slimy, and offensive stools, I administer calomel in large and repeated doses, sufficient to overcome this morbid state of the alimentary canal. Should this, however, not succeed, and symptoms of inflammatory action present themselves, blood-letting, both general and topical, should not for a moment be neglected. General bleeding, where it is practicable, should be preferred: after which, the application of a few leeches to the temples and behind the ears, by keeping up the effect already produced, affords very sensible relief; and applying them at every subsequent exacerbation, will afford the happiest results in moderating the force of the disease and promoting a healthy action. It is not unfrequently the case that children fall asleep while the leeches are on: the fits of screaming are suspended, and the vomiting, which is very troublesome, is sensibly mitigated.

Immediately after their application, the bowels should be freely opened by cathartic medicines, and kept under their influence during the continuance of active inflammation. In the choice of this remedial agent, it is important that such as are calculated to produce free and copious evacuations, without irritating the bowels, should be selected; and nothing in our list of cathartics affords more satisfactory results than calomel, either alone, or in combination with the pulvis antimonialis or creta preparata, as the symptoms present may indicate. If there be much heat of skin, with a quick pulse, dry tongue, &c., the antimonial powder will form the best combination. Where the vomiting is very troublesome, which sometimes almost forbids the exhibition of remedies by the mouth, the cret. ppt., or a few grains of sup. carb. soda, will in general afford relief. In addition to this, the bowels may be fomented with warm, or rather hot brandy, or brandy and water; observing, however, to prevent the fumes arising from it from being inhaled by the patient, as a species of intoxication may be induced, which will not only alarm the friends, but aggravate the disease. After the vomiting has so far subsided as to permit the calomel to remain on the stomach, it should be given in doses sufficiently large to purge the bowels freely, and repeated or alternated with castor-oil or calcined magnesia, till the quality and appearance of the dejections are changed to a more healthy aspect, the urine becomes more copious, and the heat of skin and rapidity of the pulse are sensibly moderated.

The plan of treatment here laid down is plain and simple, and yet, if properly directed, it will, in a great majority of cases, afford the desired relief. However much the remedies here offered may be condemned, yet experience in their use has demonstrated their value, and should teach us the propriety of using them with a liberal hand. The doctrine promulgated by a few, of the irritating and pernicious qualities of calomel, and the liability that exists of its producing the identical disease under consideration, is destitute of that solidity of position that admits the test of experience in proof of its correctness; and the assertion that calomel never does good in any case, and, when its exhibition is not followed by injurious consequences, it is because it passes the bowels uncombined, is so completely contradicted by the result of every day's experience, that we can only look upon it as the visionary reveries of a brain already too much confused to admit of correct reasoning.

After thus depleting, by every means in our power, the little patient often becomes very much exhausted, and will remain, especially during the remissions, sometimes for hours in a state of syncope. This stage of the disease is very liable to be mistaken for effusion upon the brain; in consequence of which the case is pronounced desperate—is abandoned, and the child permitted to die unmolested—when, in fact, the most violent symptoms of inflammatory action have yielded to the course of treatment previously adopted, and nature is about resuming a healthy action, but from excessive debility is unable (when unaided) to do so. Here the stimulating effects of a blister are admirably well calculated to afford permanent benefit: and I may here observe, that I have never found blisters beneficial in this disease, but on the contrary very injurious, when applied earlier than the stage now alluded to; and the directions to be synchronous with venesection in the application of your epispastics, is not only injudicious, but calculated to produce mischievous consequences.

The following case, taken from a number of others, will serve to illustrate the above principles. A child, four months old, of a good constitution, had been occasionally subject to irregularities of the bowels, sometimes very much relaxed, and at other times very costive, with occasional vomiting, for which it had not taken any remedies; when, on the evening of the 29th July, 1824, it was suddenly seized with violent convulsions, which, from being general for about two hours, gradually assumed a more local form, affecting the muscles of the mouth and eyes. It was bled freely from the arm and temples, put in the warm bath, and the bowels relieved by an injection: towards morning it became composed, and slept quietly for about an hour; it then awoke with violent fits of screaming, accompanied with a rotatory and tremulous motion of the eyes; pulse quick and chorded; a throwing of the head backward, and a constant motion of the arm and leg of the right side. Four grains of calomel, with two of pulvis antimonialis, were given at once, and eight leeches were applied to the left temple: the tremulous motion of the eyes subsided, and the fits of screaming were moderated, on their application. At 12 o'clock, the pupils of the eyes being very much contracted, and the motion of the leg and head continuing, and the calomel not operating, I gave it three grains more, with two of the antimony: this purged the child once freely, and brought away a very dark, slimy, fœtid stool. After this it became more tranquil. In the evening the fits of screaming occurred again. Three more leeches were applied, which seemed to produce comparative ease for the remainder of the night.

On the morning of the first of July, my friend Dr. Anderson was requested to see the child; who, after learning the history of the case, together with the treatment already pursued, concurred in opinion, both with regard to the diagnosis of the disease, and the propriety of pursuing with activity the plan of treatment already adopted. In consequence of which, this simple plan was continued for eight successive days; the child was leeched with three or four leeches every day, and sometimes oftener, according to the violence of heat about the head and the frequency of the pulse; and they uniformly served to moderate the fits of screaming. It also took, two or three times a day, a liberal portion of calomel and antimony, which was occasionally interposed by castor-oil or calcined magnesia, which operated freely. The pulse became slower—the fits of screaming moderated, and soon entirely subsided—the eyes became natural—the surface was bedewed with a gentle moisture—urine in large quantity—and the passages from the bowels also assumed a more natural aspect; its sleep was more tranquil, the starting and screaming during sleep ceased, and it would awake more composed, notice things offered it, and take nourishment. These pleasant symptoms continued, however, but for a few days: the child gradually fell away into a state of lethargy and inaction, from which it was aroused by a blister being laid on the region of the stomach, which was suffered to remain on till the skin became perfectly reddened, when it was dressed with the ungt. resinosum; the blister filled, discharged freely, and the child from this time went on gradually recovering its usual health and spirits.

Another case of a child, ten months old, equally illustrative of the benefits of calomel and leeches in the cure of this disease, occurred in April last. There had been a good deal of general uneasiness, which was attributed to teething: the gums were freely divided, and a portion of castor-oil administered. It however passed restless nights; and on the morning of the 20th, I found it evidently worse—it had rejected the oil by vomiting soon after taking it, and the vomiting still continued at intervals; the pulse was rapid; the pupils of the eyes contracted, yet sensible, in a small degree, to the stimulus of light; urine scanty, and high coloured; the hands were almost constantly thrown to the head and before the eyes; the head would occasionally be thrown with violence backward, accompanied with violent fits of screaming; the feet and legs were rather cool, and kept in constant motion; and there was a sensible increase of heat in the head. I now opened the temporal artery, and drew off four ounces of blood; gave it four grains of calomel, with two of the pulvis antimonialis, which was repeated every two hours till it operated; immersed the feet and legs in a warm bath, and directed an enema of Epsom salts and castor-oil. At 12 o'clock, found it had taken three doses of the calomel, though the second one had been rejected partly by vomiting, which continued at intervals; the injection had come away uncombined; and the other symptoms much as before. Instead of the pulvis antimonialis, two grs. of sup. carb. sodæ were added to the calomel, to be given every three hours till it had moved the bowels; at the same time I directed them to foment the bowels with hot brandy, observing to prevent the fumes from being inhaled by the child. 21st. The medicines had operated but feebly, though it had taken four powders, which had been further aided by a small dose of calcined magnesia. The vomiting had moderated after the application of the brandy; the heat of the head and quick pulse (which was at this time 158) continuing, eight large leeches were applied, and the calomel and antimonialis repeated as at first, together with the pediluvium. After the leeches came off, the discharge of blood was kept up by applying cloths wrung out of warm water; and the child fell into a quiet sleep, which lasted two hours. The bleeding continued for some time after this, during which time the fits of screaming ceased; and the bowels were freely purged, discharging a great quantity of viscid stringy matter, and presenting a shade of almost every colour. Having already apprised the family of the dangerous situation of the child, at the same time requesting a consultation, I met, at 4 P. M., my friend Dr. Miner, who, after being made acquainted with the plan of treatment already adopted, advised its continuance. The next morning, the heat of the head continuing, the pupils still contracted and less sensible, with constant throwing of the head backward and of the hands to the head, the leeches were again applied; and in the intervals of giving it, the calomel, with from two to five drops of tr. digitalis, was ordered. This plan was persevered in for two days (the number of leeches applied every day being lessened): the pulse and the heat of skin, and especially of the head, became gradually less; the bowels assumed a more regular action; and the child noticed things with apparent interest, and took nourishment, which it retained on the stomach. On the 26th, however, there was a great falling off from these favourable appearances: the child all at once became comatose, refused the breast, and occasionally tossed its head from one side to the other, till it finally became stationary; the pupils of the eye became very much dilated, and refused to contract on the near approach of light; and strabismus came on, which, on the most careful observation, remained permanent. The physicians concluded that effusion had taken place, and they and the attendants were led to believe that death would be the result at no very distant period. In this state of things a large cataplasm, composed of mustard, vinegar, and brandy, was applied to the region of the stomach, and similar ones to the ankles and feet; warm wine whey, with comp. spts. lavender, was given by the mouth;

and in the course of four hours, all these alarming symptoms vanished: the child went on gradually recovering its usual health and spirits, till, at the expiration of about four weeks from its first attack, it presented as fine, ruddy, and thriving a countenance as ever. It may not be amiss, however, here to remark, that during its convalescence the bowels were very irregular, and the powers of digestion weak and imperfect. This was readily overcome by the occasional use of the aromatic syrup of rhubarb, which possesses not only the virtues of the rhubarb, but the cordial properties of the spices added to it in the composition of that excellent syrup.

ART. X. *Case of a Tumour in the Antrum Highmorianum, extirpated by* CLARK WRIGHT, M.D. one of the Physicians to the New-York City Dispensary.

WILLIAM LATHAM, a healthy looking boy, aged thirteen years, came to the Dispensary, with a tumour about the size of a hen's egg upon the left side of his upper jaw. It first made its appearance about six months previous, and had gradually increased since, without any pain or inconvenience. At times, a few drops of blood had oozed from the nostril of that side, but there was no obstruction of tears. This tumour proved to be of the osteo-sarcomatous kind, growing within the antrum, the facial and palatine portions of whose parietes were wholly absorbed by its pressure. All the teeth of that side were loose, except the last molar. The first molar tooth was extracted, and a puncture made into the antrum, but nothing escaped. The physicians of the institution, and consulting physicians Stevens and Cheeseman, having decided that an operation was necessary, by extirpating the tumour and its diseased connexions, for the relief of the patient, it was accordingly performed at the Dispensary, on Monday, November 21st, by myself, in whose district the patient resided. The physicians of the institution and consulting physicians were present, and assisted in the operation.

The boy being seated in a dentist's chair, and firmly supported, an incision was commenced at the left commissure of the mouth, and continued to within an inch of the outer canthus of the eye. The integuments were then dissected as far as the orbit and the nasal process of the os maxillare, following its osseous border down to the septum. The lower portion of the integuments was also dissected away, so as fairly to expose the face of the tumour. During this dissection there was some hemorrhage, and it became necessary to secure five or six small arteries. The flaps being held away, a perforator was now introduced into the sound bone, about half an inch below the inner canthus, and passed near the junction of the longitudinal and transverse sutures of the ossa palati. Through this opening a narrow-pointed saw was introduced, and with one finger on the point, was brought out at the socket of the middle incisor tooth, (the tooth having been previously extracted,) including in its course the left anterior palatine plate, and a small part of the nasal portion of the maxillary bone. Through this opening a firm elastic saw, a quarter of an inch wide, was introduced to the place where the perforation was first made. The operator having hold of both ends of the saw, directed it in an outward and downward course, passing between the orbit and infra-obitary hole, along the suture of the os malæ with the malar process of the maxillary bone, and brought it out at the socket of the second molar tooth.

On examining the tumour after extirpation, it was found to be attached by a broad pedicle to the nasal portion of the antrum: it was of a granular structure, and sparingly interspersed with bony matter. The lips of the wound were then adapted together by three interrupted sutures. The operation occupied about thirty minutes, and the lad sustained it with a great degree of fortitude for one of his age.

Tuesday, 22d. The patient slept six hours last night, and is free from pain; takes liquid nourishment, and is enjoined not to move his lips or jaws.

Wednesday, 23d. Slept well during the night. The saliva constantly running from his mouth. There is a moderate degree of inflammation of the integuments of the left cheek.

The parts remained in this state for four or five days, at which time the swelling and inflammation began to subside, and the stitches were removed, the wound having united principally by the first intention. Fourteen days after the operation, the boy went into the country with health confirmed. He has since returned: his speech is slightly defective, but the appearance of his face has improved from the operation.

ART. XI. *Case of difficult Parturition, succeeded by a fistulous communication between the Vagina and the Neck of the Bladder, and by a closure of the Os Uteri.* By CHARLES HOOKER, M. D.

[Read at a meeting of the New-Haven County Medical Society, April 18th, 1825.]

ON the 3d of November, 1824, C. M., a coloured woman, aged about thirty-five, very fat, and of a remarkably short stature, was put to bed after an extremely difficult labour. Being called to attend her the night preceding, I learned that the waters had been discharging four days. The pains were now severe and regular, recurring at intervals of about ten minutes, and the os uteri was dilated nearly an inch in diameter. The uterus, however, with the head of the child, was found high up, resting upon the brim of the pelvis; and, by a deformity of the pelvis, the pubis and sacrum were approximated so as to render the intermediate diameter considerably less than two inches.* The woman, who had recently removed from a neighbouring State, informed me that this was her third pregnancy; that about fifteen years since she was delivered prematurely of a very small living child; and that five or six years afterwards, in her second labour, it became necessary to destroy the child before delivery could be effected. From these facts, and from a crookedness observed in the bones of the lower extremities, it seemed probable that the woman was affected with mollities ossium, and that the deformity of the pelvis might have increased since her former labour.

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* This diameter being accurately measured immediately after delivery, proved to be *scant one inch and eight-tenths of an inch*

I now waited only for a full dilatation of the os uteri, when I called Dr. Beers in counsel. The head of the child appeared large, and the bones of the cranium were uncommonly rigid. To deliver the child alive, with such a deformity of the pelvis, was therefore evidently impossible, unless by resorting to the Cæsarian operation, which was not deemed expedient. The head was then freely opened with the perforator; but the pains, though frequent and strong, proved insufficient to compress the cranium and evacuate the brain; and it became necessary to remove separately the greater part of the bones of the cranium and face. When the head was delivered, a fillet was passed around the neck, and a blunt hook was fixed into the chest. Considerable extractive force was thus applied to aid the natural pains, which still continued strong. By a perseverance in these means, the woman, after the most excruciating suffering, was at length delivered.

No uncommon symptoms immediately succeeded delivery. Within about two days the patient began to complain of much pain and soreness, and soon after of a severe dysuria. Considerable muco-purulent matter was mixed both with the urine and the lochia. The urine was discharged through the urethra, though with much pain and difficulty, until the eighth day after labour, when it began to flow involuntarily; and, on examination, a fistulous communication was found between the vagina and the neck of the bladder. The urine, within a few days, assumed a healthy appearance, but has never taken its natural course, and generally flows involuntarily; though occasionally it produces little inconvenience for two or three weeks, indicating that the power of the sphincter muscle of the bladder is very different at different times.

The lochia appeared natural, except that the discharge was mixed with considerable muco-purulent matter. About four weeks subsequent to delivery, symptoms of the catamenia occurred, but were not accompanied with any discharge. From this time the patient complained of a constant sense of weight about the region of the uterus, and occasionally had hard bearing-down pains, and other symptoms of severe dysmenorrhœa—but without any discharge. Emmenagogues aggravated the symptoms; bleeding and opiates afforded partial relief. Nearly three months subsequent to labour, the patient sent for me during an exacerbation of symptoms. On examination, the vagina was clear of obstruction, and the os tincæ could be distinctly felt; but the cervix uteri was nearly obliterated, and the uterus was considerably enlarged. From the various circumstances of the case, I concluded that the menses were obstructed by a *closure of the os uteri.* Dr. Beers was called in counsel, and we each attempted to pass a very small silver cathether into the uterus; but, as a moderate force proved insufficient to overcome the resistance, we concluded to leave the case for the present to the efforts of nature. Another exacerbation of symptoms occurred between three and four weeks from that time. The pains were by turns very severe for about twenty-four hours, when a fluid, similar in colour and consistence to tar, began suddenly to flow from the vagina. About a pint of this fluid was discharged, in almost a continuous stream, within less than an hour. After this, a moderate discharge continued about three days, with every appearance of a regular course of the catamenia. Since that time the menses have been in every respect regular.

The circumstances of this case, I think, warrant the conclusion that the menses were obstructed by a closure of the uterus, occasioned either by a spasmodic contraction, or by an adhesion of the cervix uteri. I am not aware that a similar case is to be found on record. Whether such a closure *by adhesion* would occur while the mucous membrane lining the mouth and neck of the uterus remains entire, is doubtful. Certainly there is often a violent inflammation about the cervix uteri, not followed by such adhesion; but perhaps we are not authorized to conclude that adhesion, under those circumstances, may never occur. In the case above described, delivery was effected with perhaps as little violence as the nature of the case would permit. Still it is very probable, such was the extreme difficulty of the labour, that the membrane lining the cervix uteri was either abraded, or so contused as to take on ulceration.

Art. XII. *Case of Carditis, with Dissection.* By John J. Graves, M.D. Physician to the New-York City Dispensary.

William Brimmer, a sawyer, aged thirty-two, of a scrofulous diathesis and rather irregular habits, after labouring on Saturday the 3d of the present month, (December,) returned home wetted with rain, complaining of pain in the epigastric region, nausea, and a sense of prostration, for which he applied a blister, and took some purgative.

On Wednesday the 7th, application was made to the Dispensary. I visited him the same day, and found him complaining of deep-seated pain under the base of the left scapula; continual disposition to cough; difficulty in expectorating; nausea and tenderness in the region of the liver: his tongue was covered with a dark coat, and furred to the extremity; pulse a little frequent, regular, and swelling under the finger. Ordered an emetic; pediluvium; sinapisms to the feet; a blister to be laid on the left side; and pulv. Doveri grs. x., c. hyd. sub. mur. grs. v., to be taken at bed-time, to be followed in the morning by pulv. jalapi ʒſs., c. hyd. sub. mur. grs. x.

Thursday, 8th. Found the patient much relieved by the emetic, which had caused to be thrown up a large quantity of tough mucus; the irritability of the lungs in a great measure destroyed; disposition to cough lessened, and expectoration free; tongue moist and slightly furred; pulse regular, and not showing much irritability. The pain, of which he complained yesterday, had left its situation, and had become seated in the anterior mediastinal region. Ordered antimonial solution through the day, with pediluvium and pulv. Doveri grs. x., c. pulv. ipecac. gr. j., at bed-time.

Friday, 9th. My patient had rested well. But little cough, and free expectoration; tongue moist and nearly clean; pulse smaller, soft, and regular; pain less, and situated rather higher; urine high coloured, and bowels scarcely soluble. Ordered infusion of rad. polyg. seneg. ʒj., c. oxym. scillæ ℥ij. Hyd. sub. mur. grs. iij., c. pulv. Doveri grs. vj., at bed-time, to be followed next morning by ol. ricini ℥j.

Saturday, 10th. Alarmed, upon visiting my patient this morning, to find the pulse extremely small, irregular, and intermittent; extremities cold, and pain and tenderness of the abdomen, with constant eructations. Complained of pain, or rather stricture, over the sternum (appearing, from his description, like globus hystericus); his hurried breathing accompanied with rattling: he talked loud and incessantly, but rationally; yet he was so feeble as to be totally unable to move himself. Somewhat surprised at this combination of symptoms, after a few minutes I again felt his wrist, when I found that pulsation had entirely ceased; the temporals beat languidly, and the heart could scarcely be felt. I immediately ordered mustard cataplasms to the abdomen and feet, an injection to be given, and the patient to take camphor grs. ij., c. pulv. opii gr. ſs. every hour.

Sunday, 11th. Brimmer was somewhat easier; pulse stronger and more regular; heart beating with a deep, heavy stroke, and giving to the hand the sensation as if surrounded with cotton or wool.; eructation lessened; pain and tenderness of the abdomen removed, he having had several discharges from the bowels; stricture over the sternum remained, but his breathing unaccompanied by any rattling. Ordered mustard cataplasms to the wrists, and those on the feet to be renewed; wine panada for his drink, and brandy and water every hour.

Brimmer remained quite easy from the time I saw him until about midnight, when he remarked that he would take some sleep—turned without assistance on his side—and died without a struggle or a groan.

The singularity of the symptoms, and the obscurity that marked the disease, induced me to request an examination of the body.

Dissection—eighteen hours after death. Upon opening the sternum, the liver was found enlarged, and encroaching upon the thoracic cavity; the lungs were forced by this organ and the heart to the upper and posterior part of the thorax, where they were firmly held by one continued adhesion extending over their posterior surface; they were highly injected, and exhibited an inflammatory state: the heart was enlarged, inflamed, and laid transversely across the chest, its apex to the left side. A small quantity of yellowish, opaque serum was found occupying the anterior part of the pericardium. The pericardium was thickened, and attached to the heart by a firm layer of coagulable lymph, resembling in appearance the hard-boiled albumen of an egg. This layer was about half an inch in thickness, and is separable in two portions, presenting on the surfaces attached to the heart and pericardium, a smooth and uniform appearance, but when lying together they are shaggy and roughened. Between the outer, or smooth surface and pericardium, there was a deposition of pus. The ventricles of the heart were filled with a fluid blood; the right auricle with a grumous mass of black blood, the left with a firmer and more connected coagulum. Both the arteries and veins of the thorax and abdomen were fully distended; a polypus was drawn from the aorta about twelve inches in length, and near the heart there were observed small spots upon it, which appeared to be organized, for upon holding it up to the light, small vessels were thought to be seen in its substance. The venæ cavæ were filled with a granular coagulated mass. The pericardium was firmly attached externally to the lungs, and inferiorly to the diaphragm. In the cavity of the pleura was found about sixteen ounces of serum; and a small portion of the right lung was attached to the pleura, by a similar coagulum as that found around the heart.

REVIEW.

Art. I. *A Treatise on the Physical and Medical Treatment of Children.* By William P. Dewees, M.D. Member of the American Philosophical Society of Philadelphia, of the Philadelphia Medical Society, Lecturer on Midwifery, &c. Philadelphia. 8vo. pp. 496. Carey & Lea. 1825.

Dr. Dewees is certainly entitled to the credit of being one of the most prolific, as well as one of the ablest writers on subjects relating to the obstetric art, in this or any other country. Within the short space of three years, he has presented the profession with three distinct works, of no ordinary dimensions—all of which have been eminently characterized as the fruits of sound sense, matured experience, and enlarged research. In the present volume, the management of infants and children in health, and the treatment of the diseases to which they are more especially liable, are treated of and discussed in the most ample and satisfactory manner. Convincing proofs are afforded, throughout almost every page, of the futility of the idea, once so pertinaciously entertained, of the impossibility of recognising the complaints of infants, and the consequent necessity of entrusting the care of them to old women and nurses. Absurd as such opinions may now be regarded, they for a long period held sway over the medical profession, and involved the important subject to which they related, in unmerited, and too often fatal neglect. It was not until a late period that a methodical inquiry into the nature, causes, and treatment of infantile diseases was instituted, and considerable time elapsed before the investigation was attended with very marked success. The labours of Harris, Armstrong, Astruc, and, not to mention other less distinguished writers, Underwood, at length succeeded in removing the difficulties, and clearing away the obscurities which beset the path of the medical student in this interesting branch of professional knowledge. Until the appearance of the work now before us, no attempt had, however, been made to supply the profession in this country with a systematic treatise adapted to the peculiarities of our own climate, and the consequent modifications which the diseases in question undergo. " This supineness of our physicians" (to use the words of Dr. Dewees, in the preface to the second part of his work) " is not less surprising than reprehensible, especially as many are so well qualified for the task by their talents and experience, and moreover as such strong inducement was held out by the peculiar character of our diseases, and, in many instances, by the novelty and boldness of the mode of treatment." Our author, therefore, merits praise in no ordinary degree, for his attempt to supply this deficiency; and the success with which he has accomplished his task, will add no little to his established reputation for talents and industry.

Dr. Dewees has divided the present volume into two books. The first is devoted to the physical treatment proper for children, and is divided into two parts; the first of which treats of marriage—of the conduct of the mother during pregnancy—the influence of the imagination on the fœtus in utero—the indulgence of temper—the food proper during pregnancy—the conduct of the mother during the month—treatment of the nipples—of physical and moral injuries to the child—of dressing and feeding it—and of the nursery. The second part considers the several periods of infancy, and the treatment necessary to be observed towards them, in relation to air, food, and exercise—the time most proper for weaning them—teething, &c. On all these subjects the present volume is replete with judicious and pertinent observations, derived from the enlarged experience of its author, and confirmed by the authority of the most able writers who have preceded him. They are entitled to attentive perusal and study, especially from those who are likely to be entrusted with the direction and management of life at this interesting and critical period. Nor will they be found unprofitable or unacceptable to enlightened parents and nurses, in overcoming the many idle and frequently dangerous prejudices which have so long been inculcated in nurseries, and sanctioned by the impress of time and ignorance. In recommending the volume of Dr. Dewees to a more general perusal, we hope we shall not be misunderstood as confounding it with a "*Domestic Medicine*." The author has too elevated and deep a sense of the dignity of his profession and of his own personal character, and of the important duties he owes to his brethren in general, to descend, in the hope of a paltry stipend, to so unworthy and degrading a level.

The second book, as coming more directly within the scope of the objects of this Journal, shall now receive our more especial attention. To the physician in this country it will be found an invaluable guide, long wanted, in the treatment of infantile affections. Excellent as is the treatise of Underwood, it is, in many important particulars, useless as a work of practice for this country. Its numerous and frequently forced subdivisions are not realized amongst us—its rules for the treatment of acute diseases more especially, either inapplicable to our diseases, or wholly inefficient. The importance, safety, and utility of evacuation and depletion, have never been any where so fully and so markedly recognised as in the United States. Yet the young practitioner has hitherto been compelled to gather his information of this all-important truth from scattered, and frequently inaccessible sources, or from the slow result of his own personal experience. This desideratum is now happily supplied; and we proceed to make our readers acquainted, in some degree, with the extent and value of the labour incurred in fulfilling this desirable object.

Of the want of Respiration, and its imperfect establishment. Our author devotes his first chapter for the consideration of this interesting subject. The first rule insisted on is that laid down first by Mr. White, in his Essay on the Management of Infants at the moment of birth, that "the cord is not to be tied until the pulsations in the umbilical arteries have ceased." Dr. Dewees is at some pains to counteract the contrary directions insisted on by Burns. This appears to us almost superfluous, as the rule of Mr. White has obtained almost universally, and therefore requires no additional arguments in its support.

In all cases in which the cord still pulsates, the danger of extinction of life is not great: where the pulsation has ceased, and the child's body appears languid and weak, and on dividing the cord, the blood which issues is black, there is little hope of resuscitating life. The attempt is, however, always to be made, and that not negligently or hastily, but persevered in for a length of time. In addition to the ordinary rules given, our author insists much on a careful examination of the heart and the cord, that the earliest pulsations excited in these parts may be ascertained, and lead to renewed and more vigorous exertion. In recommending the application of warmth, Dr. Dewees expresses a decided preference for *dry* warmth, as he has seen cases in which the warm bath, so generally relied on, has proved injurious. A query is also thrown out, whether a properly constructed syringe might not be highly useful in removing the mucus which obstructs the passage of the air to the lungs?

A highly interesting class of cases of the apparent extinction of life, occurs in infants that have been too long delayed in the passage, or that have had their necks too tightly begirt with the cord. The face is livid, or even black, and swollen; the umbilical arteries may be inactive, and the case appear desperate Abstraction of blood from the cord offers now the only chance of relief, and should always be practised, even if the pulsations have ceased. It should be carried to any extent until the establishment of a free respiration. The *modus operandi* of this important agent is easily explained, if we take into consideration the engorged condition of the brain, induced by the causes mentioned above. If the respiration be feeble.

and the child remarkably delicate, a few drops of warm white wine whey, repeated occasionally, will be found extremely useful.

Syncope. In this chapter we find the following interesting case, which we shall quote at large:

"Mrs. F. was delivered, on the 13th of March, 1825, of a small, but apparently a healthy child: she supposed she had not arrived, by two weeks, at her full period. The child cried distinctly, but not very forcibly. It was at the usual time washed and dressed, and took without difficulty a little warm molasses and water. The next day it appeared to be doing very well; its bowels were opened freely, and it sucked when put to the breast. It continued to do as well as children in general, for several days (until the tenth), when it seemed more languid than usual, and did not take its nourishment so freely, nor draw so firmly at the breast; but as it had had several watery green stools during the night, its languor was attributed to this cause. The condition of the bowels was but little regarded, as the nurse supposed the discharges were not so frequent as to require any medicine. In this situation things remained until the following day, when the child, after having repeatedly during the morning refused nourishment, "fainted," as the nurse called it, and we were immediately sent for.

"When we arrived, the child was in a state of fainting, or syncope; so completely, however, did it resemble one dead, that we thought it was actually so, and expressed a fear to that effect. The nurse said, No—it was not dead; it had only fainted, as it had done several times before. We placed our ear over the region of the heart, but could hear no pulsation.

"We caused flannels to be wrung out of quite warm whiskey, and applied all over its little body; small sinapism were placed upon the temples; a drop of brandy was insinuated into its mouth, and its nostrils were wetted with a little sharp vinegar. After these applications were made, which must certainly, we think, have occupied five minutes, the little creature began to discover signs of returning animation, contrary, we confess, to our calculation. The return, as it were, to life, was pretty much in the order stated above: the child, however, was found very much exhausted, and it was some time before it could swallow.

"The bowel complaint was now increased greatly, and the poor child nearly exhausted. It had no return of syncope while we staid, which was about an hour; it could, however, be scarcely said to be alive. We directed the whiskey stoups to be continued; and a weak chalk mixture with a little laudanum, was ordered to be given every hour, or until the condition of the bowels should be improved. A little wine whey, with an equal quantity of cinnamon tea, were directed to be given as often as the child could swallow them.

"We repeated our visit in the evening. The child had had during our absence one "fainting fit," but it did not last so long as the former: its bowels were still much disturbed, and the child looked more like a corse than a living being. We desired all the previous remedies to be punctually continued. Our next visit was not until early the next morning. The child had had several slight "faintings;" its general appearance we thought more favourable; it swallowed with considerable freedom; its bowels were much improved; it could cry audibly, and looked about with some vivacity. During the whole of this period, its little eyes swam in a yellowish fluid, of considerable tenacity and quantity; indeed, the quantity was so great as to flow down its cheeks; and so tenacious, as to be traced through its whole course by the coat which it left upon the skin.

"We desired a perseverance in the plan mentioned. From this time it began to recover, and mended rapidly, without any return of the faintings. It is now alive, and doing well."—p. 267.

Of the Meconium. In cases of long retention of the meconium, Dr. Dewees has found, after other medicines, as castor-oil and magnesia, have proved ineffectual, a solution of carbonate of soda very useful. In the case of a child, ten days old, very much afflicted by constipation, and to which several teaspoonsful of castor-oil and a scruple of magnesia, in undivided doses, had been given without effect, he administered a grain of the soda in a teaspoonful of warm water every fifteen minutes, until ten grains had been taken, when the child was relieved.

Jaundice. In this disease our author relies principally on castor-oil, and calomel in very small doses, thus:

Calomel, gr. iij.
Sacch. alb. gr. vj.
M. bene, div. in xii.—every two hours in molasses,

and on the solution of soda. Where diarrhœa supervenes, laudanum may be necessary, and, in extreme cases, the warm bath has proved eminently useful.

Erysipelas. In the form which attacks infants, our author recommends, as local applications, blisters and mercurial ointment. Of this latter application we are inclined, from our own experience, to think very favourably; at the same time we must state that we have seen the ordinary mild applications succeed, as lead-water, spirits of wine, &c. In the general treatment our author differs from Underwood, in the indiscriminate administration of bark recommended by the latter; and we think his objections sound and unanswerable. In the latter stages of the disease, or in cold cases, it may become indispensable.

Aphthæ. Dr. Dewees combats the opinion so long maintained, and latterly by Dr. Good, in his System of Medicine, that aphthæ are transmitted from the œsophagus through the stomach and intestines to the anus. In one case dissected by himself, Dr. D could find no trace of such continuous affection; and he adds as a reason, that it is in violent and long protracted cases alone that the anus discovers any signs of irritation. To us this reasoning does not appear very fortunate. The solitary case dissected will scarcely suffice to overturn a general belief; and the argument adduced in the latter clause of the preceding sentence, proves the very reverse of what it was intended to do, as it only shows that the aphthous inflammation requires some time before it travels throughout the whole course of the intestines till it reach its lower extremity. Is this not an admission of its transmission? Our author denies the contagiousness of these affections, and entertains some doubts of their being caused by a disorder of the stomach. His internal remedies, however, which are the usual ones recommended, evidently act on the principle of a strong sympathy between the parts affected and the stomach. Much reliance is at the same time placed on the local application of equal parts of borax and sugar.

We shall pass over some of the succeeding chapters on colic, ophthalmia, ulceration of the mouth, inflammation of the breasts of children, dentition, crusta lactea, and several other ordinary complaints of infancy.

Diarrhœa. This is well known to be one of the most troublesome complaints of children, and one which, if neglected or treated improperly, is sure to terminate only with death. We are glad, therefore, that Dr. Dewees has paid especial attention to it, and that his directions for its management are so full and satisfactory. He divides the disease into six species: the feculent diarrhœa—the bilious—the mucous—the chylous

—the lienteric—and, lastly, the chronic, or "the weaning brash."

The feculent diarrhœa is caused, either directly, by the presence of irritating substances in the intestines; or indirectly, by the force of sympathetic relations subsisting between the intestines and other parts, as with the skin, the brain, &c. In the former case it is necessary to commence with a cathartic, selected according to the indication of the stools, unless the stomach be foul, when an emetic should be premised. Calomel is preferred by our author for this latter object, with the following judicious remarks:—

> "For this purpose, we have ever found calomel, in proper doses, the best possible remedy; for it is almost as certain to cause puking, under such circumstances, as a medicine professedly emetic, without the inconvenience of the latter remedy. The calomel, in such cases, had always better be given in divided doses—say, the full dose, divided into three parts, and a portion of it given every hour in a suitable vehicle,* until it effects the intended purpose.
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> "The doses of calomel proper for the different ages and habits of children, are easily ascertained when given as just suggested, in divided doses; as this medicine almost always acts with more certainty and promptitude, when thus given, whether its operation is intended to be emetic or cathartic; and at the same time, no possible risk is incurred, as the child cannot take in this manner an over-dose. With the adult, we know that enormous doses are given by some, and this without any additional sensible, though it is said with a greater certainty of ultimate effect: but this does not obtain in the child, where there is so much more irritability of system—and of course it must not be taken for a rule. Therefore, should a full dose be estimated to be six or eight grains, or even less, it must be divided into three or four portions; one of which should be given every hour, until this quantity be taken, unless the previously exhibited parts have operated. And should this fail to have operated as an emetic, we may be pretty certain there is nothing offensive remaining in the stomach, and the calomel will sooner or later pass through the bowels.

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* "It is a matter of consequence to attend to the vehicle in which calomel is given; its great weight prevents its being suspended by water, or any other equally thin fluid: it must, therefore, be mixed with a drop of syrup, almost of any kind; or, with a very small portion of loaf sugar, may be thrown dry into the mouth. It is also of much use to attend to the quantity, as well as the quality, of the vehicle, as much error is committed by employing vastly too much of it. The quantity should be no more than will entangle the calomel."

> "We have made the above remarks, with a hope they may diminish the fears so very often entertained by the violence of this medicine: we can truly say, we have never witnessed a single instance of over-purging or puking from this drug. We do not mean, however, to convey the idea that it cannot happen: far from it; for we are sure it might take place with it, as well as with any other medicine injudiciously exhibited; we only mean, that too much apprehension is frequently cherished when it is exhibited. Therefore, a grain or two more of calomel to a child beyond six or nine months of age, is of no moment, provided this quantity is all the excess. Nor would we say there are not peculiarities of constitution which would prohibit the use of this medicine. These cases, however, are so very rare, as hardly to amount to an exception: but when they occur, they should be strictly attended to."—p. 357–8.

In cases in which the disease has been indirectly brought on, the causes thus producing it should be attended to, and, if possible, removed; after which the disease is to be treated as in the first instance. The following observations on the use of laudanum deserve attention:—

> "We are aware that many are opposed to the use of laudanum in the early stages of diarrhœa; but we think they are too indiscriminate in the rejection of this remedy. We are ourselves adverse to its administration, where the bowels have not been liberally purged; where there is fever; and where there is no pain: but where neither the want of due purging, nor fever, make a contra-indication, we almost always give a few drops at night, and especially if the child be very restless, or in pain. We are persuaded we very much abridge this complaint by this plan; and almost certainly prevent its running into a chronic form, after we have removed, as far as in our power, the exciting causes of the disease."—p. 360.

In bilious diarrhœa, we are recommended to evacuate the bowels by calomel, in small but repeated doses, and then at night to tranquillize their action by laudanum; and in the mucous form the same method is to be pursued.

Chylous Diarrhœa. Dr. Dewees believes that in this disease there is a deficiency in the secretion of bile, and that the ingesta are not properly digested, and hence pass too rapidly through the bowels. Debility and evacuation accompany this affection to a remarkable degree. The treatment consists in withholding all food from the stomach, and confining the child to small quantities at a time of rennet whey, or gum Arabic water; in restraining the passages by anodyne injections "of full power" at night; and administering, during the day, minute doses of calomel, say the quarter of a grain every four hours, with the twentieth of a grain of opium.

The author closes his remarks by the query,—Whether small quantities of bile, exhibited in some form or other, would not be useful in this complaint?

The *Lienteric diarrhœa*, described by our author, does not differ materially from the chylous, either in the history of its symptoms, or in the treatment required for its removal.

The seventh form of diarrhœa is the *Chronic*, identified, in the opinion of Dr. Dewees, with the atrophia ablactatorum of Dr. Cheyne. This is attempted to be proved by the similarity in the history, progress, fatality, and post-mortem appearances in the two diseases. In the management of this affection, four conditions may exist:—First, the hepatic system may be involved in the intestinal affection; second, inflammation or ulcerations, contractions, and intersusceptions, may have supervened; third, worms may be present, and add, by their irritation, to the violence of the disease; and, fourth, the influence of habit may render the disease inveterate. Peculiar modifications of treatment are required for each one of these aspects of the disease, and are detailed with great accuracy and minuteness. We must refer to the book for information on these several points, analysis being almost out of the question.

Cholera Infantum. This is one of the few diseases which are peculiar to this country, and which is, more than any other, destructive of the lives of infants and children. Even where it proves not fatal, it is always a highly distressful affection, proving the source of long-continued and severe suffering to the little patients, and of exquisite trials on the fortitude and sensibilities of mothers. Emaciation—constant and acute pains—watchfulness—insatiable thirst—a countenance denoting the most afflictive agony—these are only a few of the symptoms which render this disease the most severe in aspect and in reality, of any that compose the mass of our infirmities at this early period of life. Happy are the parents, and thrice blest the physicians, who, by unceasing vigilance and discriminating skill, suffer no opportunity to pass by without an attempt at mitigating the violence and reducing the strength of this terrible enemy to life. Too much attention cannot be paid by the medical student to the investigation of this subject: a perfect knowledge of its various forms, and of the method of cure adapted to each, will alone furnish him with means to encounter a disease which is unfortunately too common and too fatal. Still it is not without the reach of medical skill. Unbiassed and matured experience never fails to arrest its progress, if an attempt be made to subdue it in season, and by those efficient agents which arrogant and blind prejudice only condemns. On so important a theme, we shall ask no apology for permitting our author to speak at large. His description of the disease is full and interesting.

"Cholera infantum makes its approaches in different ways. In some instances it comes on as a simple diarrhœa, though the stomach is also very apt to be affected; and in its more violent forms, there are vomitings and purgings, attended by no inconsiderable spasmodic uneasiness, constituting the cholera morbus of farther advanced life. In its ordinary forms, the fever, which soon supervenes, is of an irregular remittent character—the exacerbations being highest in the evening. The pulse is usually small, quick, and feeble, or irritated, and corded; but rarely full, strong, or voluminous. Determinations to the brain, or at least this organ seems early to be affected sympathetically; as is manifested by a tendency to stupor or delirium, or sometimes even frenzy. The eyes also denote this cerebral affection; they are either fierce or languid in expression; and when the patient sleeps, are half closed. Thirst is intense, and for a time really unquenchable; cold water is clamorously demanded—but if swallowed, is instantly rejected. An unequal distribution of temperature commonly exists; the head, and region of the stomach and bowels, being hot, while the extremities are cold.

"The evacuations from the bowels are various. The natural fæces are mostly retained, though occasionally small lumps may be found involved in the other discharges. These are sometimes thin and watery, and at other times more thick and tenacious; consisting chiefly of slime, or mucus, occasionally tinged with blood. The colour may be green, or yellow, or white, or brown; and may be inodorous, or exceedingly offensive. Commonly, however, the smell is that of sourness, or of putridity. The irritability of the alimentary canal is sometimes so great, that the ingesta rapidly pass off unaltered, as in lientery.

"We have few diseases in which emaciation so rapidly takes place, or where, in its latter stages, there is a greater alteration of general condition and aspect. The child, at first, becomes pallid, and the flesh flabby; and, so completely is the fat ultimately absorbed, that the integuments hang in folds; and in those parts on which the body rests, livid spots appear, followed by ulcerations.

"The skin on the forehead is tight, as if bound to the bone; the eyes are sunk; the cheeks fall in; the nose is sharp; and the lips are shrivelled. Even under such circumstances, which would seem to denote immediate dissolution, life will be in some cases preserved for weeks, and a recovery finally take place. The belly becomes tumid, from flatulence; the feet still more frequently are œdematous; aphthæ appear; the mind, as well as the senses, which hitherto may not have been impaired, are now obtuse, or so entirely lost, that the child lies unmoved by ordinary excitements, and will even allow flies to collect on the face, without being irritated or disturbed. This form of the disease will sometimes continue for five or six weeks. But as death approaches, a gradual aggravation of symptoms takes place; and there is one, which, as far as we have observed, has always proved fatal: it is a crystalline eruption upon the chest, of an immensity of watery vesicles, of a very minute size. The best idea we can convey of the appearance of this eruption, is to imagine a vast collection of vesicles, apparently produced by flirting an equal number of very minute drops or particles of boiling water, and each particle producing its vesicle. We first pointed out this appearance to our friend Dr. Physick, in the year 1794, in the disease now under consideration; and subsequently, under like circumstances, to Dr. Rush; both of whom acknowledged the eruption new to them.

"This symptom may readily escape observation, if not looked for: it requires that the surface on which it has spread itself, should be placed between the eye and the light, and viewed nearly horizontally.

"There is another symptom, which attends the last stage of this complaint, which is much more common, but not less fatal; which is, the thrusting of the fingers, nay, almost the hand, into the back part of the mouth, as if desirous of removing something from the throat. The popular opinion is, that there is a worm irritating the back part of the fauces. And we may mention another, which we do not remember to have seen noticed; which is, the escape of a live worm or worms, in the chronic stage of this affection. If the worm comes away dead, there is nothing in the circumstance; but if alive, it is a deadly sign. We have remarked the same in dysentery.

"In other cases, however, especially where it puts on the character of cholera morbus, or dysentery, its progress is more rapid, and runs in all respects the course of these affections. Death, in the former of these instances, will sometimes take place in a few hours: and in the latter. from three to ten or fifteen days."—p. 396.

Dissections always prove the nature of the disease in the most clear manner. The brain presents no morbid changes, excepting in the latter stages. The viscera of the thorax are seldom affected. It is the abdominal viscera which suffer.

> " The effects of previous inflammation may be traced, in some cases, throughout the whole of the alimentary canal, though it is in the mucous membrane that they are principally to be found. Dark livid spots are dispersed over this coat of the stomach, and of the small intestines, particularly the duodenum, near to the pylorus. Coagulable lymph is also, in some instances, spread on their surface, or is found in detached pieces. In many parts there is an alteration of structure, by the thickening of their coats; so much so, that the calibre of the tube is reduced considerably.
>
> " The large intestines are seldom involved in this mischief; and perhaps never, excepting where the disease assumes the dysenteric form. Now and then, appearances similar to those of the primæ viæ, may be seen upon the peritoneum, though not to any extent. The liver, under almost all circumstances, and especially in cases of long continuance, is greatly enlarged, so as sometimes to occupy two-fifths of the cavity of the abdomen. But, though thus increased, there is not any very evident derangement of structure. It is merely distended, or swollen, by congestion; and, on this account, is more firm and solid, than natural—a state of things, evidently induced by torpor in the portal circulation. The gall-bladder, in some instances, is found filled with dark green bile, and, at other times, with that which is pale, or nearly colourless. The other viscera of the abdomen are usually healthy. It may, however, be proper to add, that the contents of the bowels, for the most part, consist of a thick, tenacious mucus, involving small lumps of fœcal matter, occasionally coloured by bile. When this disease causes death, by assuming a chronic form, it very much resembles the chronic form of diarrhœa, or weaning brash."—p. 400.

In the treatment of this affection, one of the first symptoms to be encountered is the great irritability of the stomach. To subdue this, our author has found nothing so useful as an injection of a gill of warm water, in which have been dissolved three teaspoonsful of common salt. This is the dose for a child of a year old; it must be proportionably less for one younger. A teaspoonful of strong coffee, without sugar or milk, every fifteen minutes, should be given to very young children especially. Dr. Dewees has seen it, in all ages, act like a charm.

If the stomach be not tranquillized by these means, minute doses of calomel must be had recourse to. The following is our author's prescription:—

℞. Calom. Ppt. gr. iij.
Sacch. alb. gr. vj. M. div. in part. xij.

One of these powders is to be given every hour, until the bowels are operated on; after which the powders must be given at longer intervals. In the evening, especially if there is pain, an injection with laudanum should be given. In this way the first stage of the disease is treated, excepting where there is much fever, when general and local blood-letting is necessary. When the irritation of the stomach is very obstinate, blisters should be applied to the legs.

The second stage is to be treated by anodyne injections, a mild purgative being occasionally interposed to prevent oppressive accumulations in the bowels.

The warm bath and blisters are necessary to divert to the skin. If, however, irritation in the bowels still continues, with bloody evacuations, the oleaginous mixture, composed of castor-oil, gum arabic, and laudanum, or, what is better, melted butter, or a union of sugar of lead, ipecacuanha, and opium, should be administered.

When chronic diarrhœa has supervened, the cretaceous and alkaline preparations are called for. We copy one or two prescriptions.

℞. Cret. Prep. vel Test. Ostreor. ʒiſs.
Gum Arab. }
Sacch. Alb. } - - āā ʒj.
Tinc. Theb. - - - ggt. x.
Aq. Font. - - - ʒiij. M.

Another prescription is given, in which thirty grains are substituted with the above ingredients for the chalk.

As a tonic, the following formula of Dr. Chapman is recommended:—

℞. Sal. Martis. (super-sulphate of Iron) gr. ij.
Acid Sulphur. - gtt. x.
Sacch. Alb. - ʒj.
Aq. Font. - - ℥j. M. Dose ʒj.

Directions then follow on regimen and diet, with which we shall not detain our readers.

Pertussis. It has frequently been a source of surprise to us that this disease, intractable as it frequently proves to the powers of medicine, hidden as are its origin and causes, should have hitherto elicited so little discussion in the medical world. It carries off a full proportion of victims annually; and yet it is too often confided, as of no consequence, to the care of mothers and ignorant nurses, as if its treatment was well ascertained, and its cure a matter of course. The disappointments which too often attend such fallacious confidence, should at length awaken attention to the subject, and lead to a more ample investigation of the nature, causes, and treatment of the disease.

It has been a question with some, whether whooping cough is contagious, or in all cases derived from epidemic influence. Our author is evidently inclined to the latter opinion, but does not think it prudent, for practical purposes, to disclaim altogether a belief in its contagious attributes.

The following is Dr. Dewees's view of the nature of this affection:—

> "It is obvious that the irritation of the remote cause, wherever it may be primarily seated, induces an inflammation of the mucous membranes of different parts of the organs of respiration, occasioning an increased secretion of fluid, which accumulating, acts as an extraneous substance, and brings on the cough for its expulsion. When this natural effort succeeds, there is for a time a complete interruption of the coughing; but on its being re-produced, we have a repetition of the paroxysm. By too long a continuance of this irritation, disorganization takes place in the lungs, &c.; and the system at large, participating in the morbid affection, a gradual exhaustion of strength, and death takes place: or, the air-cells being choked up, or the glottis closed by spasm, or by collections of mucus, or lymph, the patient dies suddenly from suffocation: or possibly, in some instances, as is represented, the brain may become so affected as to constitute a new and more complicated case, terminating life by coma, convulsions, &c. At this period, an inflammatory state of the system undoubtedly exists: it however exhibits a very peculiar character, owing, perhaps, to the nature of the cause by which it is excited; for it unquestionably is far less obedient to the usual remedies than ordinary inflammation; and in many respects proves illustrative of the modification which this condition receives from the agent producing it."—p. 411.

In the treatment, our author does not advance any thing novel. He is, however, interesting in his details of all that has been recommended and found most useful.

Cynanche Trachealis. In relation to this disease, our author observes, that nothing can be more satisfactorily proved than the agency of cold moist air in its production—especially in the spring. In Philadelphia, he observes, that "a north-east wind in early spring, or fall, is almost sure to produce, or reproduce, this complaint in those who are disposed to it." Dr. Dewees divides croup into three stages: the forming stage —the completely formed stage—and the congestive stage; and his description of each is so just, that we shall quote him at length.

"*First Stage.*—One of the first and most certain signs of this complaint being about to take place, is a peculiar sonorous hoarseness, when the patient coughs, but which at this period does not affect the speaking voice. This peculiarity exists for a longer or shorter time, without much increase, even for several days, in some instances; while in others, the interval, or stage of formation, is very short, but decidedly marked. This hoarseness may, in some instances, be accompanied or preceded by catarrhal symptoms, but not necessarily. In this stage, when not attended by catarrh, we find, for the most part, the circulatory system undisturbed, and the respiratory not confined, nor even hurried. The child, in general, is as cheerful as usual, and its appetite and digestive powers are undisturbed. In a number of instances, where the disease was making an insidious attack, we have seen children exert themselves even pretty violently, without creating any uncommon hurry in the breathing, or occasioning the slightest embarrassment in it; yet these very children, in the course of a few more hours, were reduced to the last extremity; and some of them did not escape with life.

"We think we have observed, however, in this forming stage, especially in the insidious attacks, the hands to be more than usually cool; the face to be rather unnaturally pale; and the skin to resemble, in a small degree, the cold stage of an intermittent, but not attended by a sense of cold: this state of collapse remains for several hours, in some instances, before the system is roused to re-action. But where the attack is sudden, we are by no means certain that this condition always precedes the febrile state, which so frequently is awakened, and made to accompany this complaint.

"During this period, however, the mucous membrane of the nose is observed to be affected; since the secretion in the nostrils is either arrested altogether, or very much diminished; and continues to be so during the whole course of the disease, unless it terminates favourably. The cough is short, dry, and sonorous; or if any thing be expectorated, it is thin and whitish, and in very small quantities. If the throat, or fauces, be inspected, nothing unusual (at least as far as we have observed) shows itself. The back part of the tongue is perhaps rather more loaded than is natural, but it is far from being remarkable.

"After the continuance of the above symptoms for a longer or shorter time, a change takes place, by an aggravation of all of them; and at the same time others are added; and these will constitute the

"*Second Stage, or that in which the Disease is completely formed.*—We now observe the hoarseness to be increased, and to affect the speaking voice; that is, the tone of hoarseness is evidently deeper, more ringing, and betrays itself in every attempt to speak; the cough is more frequent, and the spells longer; a degree of exhaustion, attended by an increase of the difficulty of breathing, follows each effort; the face becomes flushed during the coughing, but generally subsides as the circulation becomes more equal, after the exertion, but leaves the cheeks, or perhaps only one, redder than natural. The circulation is now much hurried in most cases; at other times it is very little disturbed: when this latter is the case, the face is seldom flushed, and the hands and skin of the extremities are rather below the natural standard of heat. The child is drowsy, and falls into frequent, but disturbed slumbers, from which it is generally roused by the most heart-rending cough, and an increase of oppression. The child raises itself up, if sufficiently old to do so; or if not, elevates its head, with desire more freely to gain air. This state of things does not last long; for if the progress of the disease be not arrested here, it marches with rapid haste to the

"*Third, or Congestive Stage.*—At this period, the cough is attended with some expectoration of a thin, or frothy mucus, which affords no relief: it is more frequent in its recurrence, and more permanent in its duration; sometimes so much so, as to threaten strangulation; the child becomes much exhausted by these efforts, and throws itself back as if in despair, but from which it instantly springs, from the feeling or dread of instant suffocation. It cannot now lie down; and it either throws its head much in advance, as in asthma, or bends itself very much backward; or it finds no relief but in a supine position, and that apparently the most unfavourable to easy breathing. It is restless in the extreme; and alternately tries every position, without finding relief from any.

"The face is no longer flushed; a dark lividity takes its place, which sometimes spreads itself even to the neck; the lips partake of this change; and the gums become pale and white, while the tongue is not unfrequently blackish, as if the blood was retained in it by a ligature. The forehead becomes shining, and the skin looks as if it were tightly stretched over it; it is wet with cold perspiration, as is now indeed almost every part of the body. The pulse is small, frequent, fluttering, and contracted. The heart beats with violence, nay sometimes audibly. The auxiliary muscles of respiration

> are now called into requisition, and this process seems only maintained by their aid; a deep hollow is made immediately below the xiphoid cartilage, most probably by the severe contraction or efforts of the diaphragm; and the action of the heart is distinctly seen, even at a distance from its seat.
>
> "Though the cough is now more frequent, and the oppression much increased, the hoarseness is neither so great nor so sonorous. It is now almost a loss of voice, and the child, when it speaks, seems to employ for this purpose a loud whisper. Even when it coughs, the voice is less harsh; or rather, it has lost in a degree that appalling, brazen, vibratory sound, with which the two first stages are attended. This change of tone has but too often misled the inexperienced ear to a belief that the disease was yielding; and thus has given rise to hopes that were but too soon to be for ever blasted.
>
> "Thirst oftentimes becomes so intolerable, as to render the demands for drink both frequent and clamorous, though every attempt to gratify it is apparently at the risk of suffocation. The countenance is now anxious beyond expression; the eyes become more piercingly brilliant and beseeching—they eloquently implore a relief, which neither affection nor science can afford; and the poor sufferer expires, with a look full of supplication and anguish."—p. 429–433.

We perceive that Dr. Dewees does not believe in the existence of that distinct species of croup which has been denominated the spasmodic; and he is equally sceptical in relation to the doctrine maintained by some, which makes the croup to consist in inflammation and spasm united. In the two first stages of the disease, he expresses his utter disbelief in the presence of spasm; in the last, he admits that it may, and possibly does, take place.

Our author treats as altogether visionary, the opinion of those who have undertaken to dispute the formation of a membrane within the trachea in this disease. We concur most fully with him when he says, that such a doctrine can only have been advanced by "those who are not in the habit of investigating diseases by dissection."

Treatment. Under this head, we are furnished with many valuable suggestions in relation to the management of this formidable disease. In the *first stage*, Dr. Dewees recommends in all cases, the instant the croupy sound is observed, to inflame the external throat by the application of the spirits of turpentine, hartshorn, or mustard and vinegar. If the first application of these articles does not subdue the hoarseness, it is to be repeated as soon as the rubefacient effect has subsided. At the same time the compound syrup of squills is given, in doses suitable to the age of the child, and urged, if circumstances require, till an emetic effect is produced.

In the *second stage*, the system may be found in one of two conditions—viz.: 1. Where the disease is completely formed as regards the state of the trachea, but without the arterial system being much affected. 2. Where the action of the arterial system is much exalted, in consequence of the inflammation of the trachea. Each of these conditions require a different mode of treatment.

> "In the first case, the force of the disease is mainly spent upon the organs immediately concerned in respiration; hence the cough is more frequent, nay, sometimes almost incessant; the hoarseness less deep, but more sonorous and vibrating; no expectoration, or in a very trifling degree, and that of unconcocted serum, the discharge of which affords no relief. The face for the most part rather pale, or partially flushed; the nostrils very dry; the hands and skin generally rather below the natural standard; the eyes somewhat bloodshotten; the pulse frequent and small, and the respiration laborious, and every hour becoming more and more so."—p. 437.

Under these circumstances, Dr. Dewees considers the remedy so generally relied on, namely, blood-letting, to be, if not positively injurious, never beneficial. He therefore never employs it, but commences his treatment by the stimulating applications already mentioned, to the throat, and an active emetic of tartrite of antimony; or, should it be advisable, to evacuate the bowels at the same time. The antimony is combined with calomel in the following manner:—

℞. Tart. antim. gr. ij.
Calomel - gr. xij.

This to be divided into eight parts, and one to be given every twenty minutes or half hour, until an emetic and cathartic effect be produced. After the free operation of this medicine, the compound syrup of squills is to be given every hour or half hour, according to circumstances. If the disease does not yield to this treatment, calomel, in large and repeated doses, is the remedy then relied on.

In the second stage of the disease, that is, where the blood-vessels are more affected, free venesection is the primary and principal means of relief resorted to. The point to which the bleeding is to be carried, is that of making the pulse flutter under the finger, or a disposition to syncope shows itself. The repetition of the bleeding is to depend upon the re-action of the system and force of the pulse. Between the intervals, emetics, rubefacients, calomel, as before directed, are to be assiduously used. Of the various modes of local bleeding, Dr. D. prefers the use of cups, and between the shoulders the best place for their application. With regard to leeching, Dr. D. makes the following remarks :—

> "The operation of leeching is attended with several circumstances decidedly adverse to this disease: for, 1. It employs considerable time; during which the patient is obliged to maintain an irksome position, and this may be extremely unfavourable to his breathing. 2. It often becomes important that the quantity of blood to be drawn should be very exactly determined: this cannot be done in leeching—especially as the after-bleeding is sometimes very considerable, in spite of every attempt to arrest it, to the manifest injury of the patient. 3. Their coldness; and the sudden exposure of the throat, after having been warmly covered, is oftentimes so mischievous, that the bad symptoms can be seen to increase during the operation, and are almost sure to follow immediately after. We can most safely declare we never have, in a single instance, seen it do good; but we have, in a number of cases, seen it do harm."—p. 441.

Of blisters our author does not seem to entertain a very high opinion, preferring to them rubefacients "whose powers are more at command, and can be renewed whenever they have ceased to maintain a proper degree of irritation."

Of the warm bath, Dr. D. expresses the following opinion:

> "We can most conscientiously declare we have never, in a single instance, witnessed a decided advantage to arise from its application; but we can most truly say, we have had the most unequivocal evidence of injury; we therefore never prescribe it in this disease."—p. 443.

Third Stage. The indications here are, 1st, to remove the obstructing lymph from the windpipe; and, 2d, to prevent the formation of more, by altering the condition of the inflamed surface of the trachea. Emetics have sometimes fulfilled both these indications. Dr. Dewees, however, expresses but little confidence in any other remedy than the polygala seneca. In relation to tracheotomy, our author makes the following judicious remarks:—

> "In our opinion, the operation has been proposed with more intrepidity than discretion; for until we can prevent new accumulations after the removal of the previous ones, we need promise ourselves but little success from this scheme. It has been said, that the failure from this operation has been principally owing to its being performed too late; and hence it has been advised early in the disease. But who would promise himself that he had saved life by this operation, should the patient even live, since if it be performed early, other remedies might have succeeded as well? And when performed late, who has witnessed its success? Therefore, in the early stage of the disease the operation is certainly not called for, nor would it be proper to have recourse to it, since the disease is very often relieved without it; and in the latter, we believe it has ever been unavailing.
>
> "We have seen it performed twice without success, where the operation, simply considered, had every advantage which sound judgment and consummate skill could give it—for Dr. Physick was the operator. And we believe we do not venture too much when we say he has no confidence in it."—p. 446.

Burns. Accidents of this sort so frequently occur, and are so often attended with dangerous consequences, that their treatment becomes a matter of great interest. The following is Dr. Dewees's method of managing them:—

> "When a part is merely inflamed, we have found the steady application of cold whiskey, brandy, alcohol, and even water, not only relieve the immediate pain, but sometimes to quickly remove the inflammation, especially if it be not extensive. If the inflamed portion of skin be considerable, the same plan may be pursued; but the relief will not be so sudden, though it may eventually be as certain. Wrapping the part in cotton is highly recommended, but we cannot speak of it from experience.
>
> "If vesications attend, we almost always apply the spirit of turpentine, a little warmed, to the part, and protect it from the air as quickly as possible, if the wound be considerable, and also, that the turpentine should not be applied to the sound skin. Should much pain attend, we give a suitable dose of laudanum. We almost always allow the first dressings to remain for twelve hours; and when we re-open the sore, we take care it shall not be exposed to a current of air, or a cold atmosphere. Our second dressing consists of the basilicon ointment, according to the recommendation of Dr. Physick.

> "We are in the constant habit of opening the vesications by the point of a needle, before we apply the ointment. This kind of dressing is continued so long as the peculiar inflammation of a burn continues—or, as the common people express it, until the fire is out. Should the discharge now become too abundant, (a very common occurrence, especially if the surface be large,) we use the cerate of Turner, or the simple cerate, in which a quantity of prepared chalk is incorporated.
>
> "Should the burn be deep, and of course the part killed, the basilicon is the best application until the parts begin to show signs of separation. But should the parts immediately round the injured part be much inflamed, we are in the constant habit of using the bread and milk poultice, until it subside. When the inflammation is reduced to a healthy degree, we return to the basilicon or to the cerate, until the part slough out. After this has taken place, we either use Turner's cerate, or the basilicon, or simple cerate, as the wound may seem to require. We use the first where the discharge is too abundant; the second, where it is deficient; and the third where the suppurating process is going on kindly."—p. 480.

In closing our notice of Dr. Dewees, we have only a single remark to make. In the preface to the second part of his book, he professes one of its objects to be that of embodying into a systematic form, the recorded experience of our American physicians in relation to the diseases of children. In performing this task, which we think he has very satisfactorily done, we should have been much more gratified had we found an occasional acknowledgment made to some at least of the physicians upon whom it is quite evident that he has drawn pretty largely. We had a right to expect this from an author of Dr. D.'s established reputation, whose just fame can sustain no possible diminution by freely giving credit where it is merited. We regret this omissiou on the part of our author, not merely because it is an act of injustice to his professional brethren, but because we fear it may by some be attributed to motives very different from those by which we are sure he was actuated.

Art. II. *Typhus Syncopalis, Sinking Typhus, or the Spotted Fever of New-England, as it appeared in the Epidemic of* 1823, *in Middletown, Connecticut.* By Thomas Miner, M. D. pp. 48. Middletown, Connecticut. 1825.

Our object in noticing this pamphlet is not criticism. Indeed from the plain matter of fact manner in which it is drawn up, it would not be very easy to indulge in it, even if we felt so disposed. Our simple design is to record upon our pages the history of a very formidable, and in some respects a very singular disease. With this view we shall content ourselves with laying before our readers as condensed an abstract as we can of Dr. Miner's account of its general character and mode of treatment. Dr. M. informs us that with the exception of a few sporadic cases which occurred since the year 1815 or 16, the disease which he describes was entirely new at Middletown, and had never prevailed there as an epidemic until 1822. In that season, he states, that the fevers in that region assumed a new character, differing entirely from regular typhus, whether of the nervous or putrid type, and requiring a corresponding change in the treatment. In 1823 the disease is described as having prevailed in a greater or less degree, in about a dozen towns in the vicinity of Middletown, and in all of them to have had a common character. Between the months of March and December of that year, about three hundred and sixty cases fell under the care of Dr. Miner and Dr. Edward S. Cone; of these, twelve only proved fatal. Persons of all ages and of both sexes were alike subject to the disease. It made its attack under two different forms, which Dr. M. calls the sudden and the insidious. In the former the duration of the disease was from five to seven days. The account given of the symptoms is somewhat elaborate; but we find it impossible to condense it, and shall therefore give it at full length.

"In nearly every instance, whether severe or moderate, the disease began with more or less pain in the head, especially about the forehead. Vertigo was also a symptom almost universal. In some, a sudden faintness, dizziness, or sense of extreme exhaustion, so that the patient could neither sit nor stand upright, was the first symptom. In others, the attack resembled a severe concussion of the brain, or a sudden stroke of palsy or apoplexy. Indeed, every thing seemed to show that the brain and nervous system were the primary seat of the disease.

"In almost every case, the skin was preternaturally cool, for several of the first days, and subsequently, in temperature, *it never exceeded the standard of health*, in more than three or four cases. Even after it had been warmed by internal and external heat, in conjunction with stimulants, it was ever liable to become *partially* cold, as about the thighs, knees, legs, arms, hands and feet. In the course of the disease, more especially in the worst cases, it was almost always so much benumbed, as to be insensible to an ordinary pinch or scratch, and while in this state, incapable of being affected by common sinapisms and blisters. This numbness was sometimes most prominent in one side, or even in one leg or arm. In the latter stage however, there sometimes occurred periods of extreme susceptibility to the impression of rubefacients and epispastics; but as a general rule, external applications, of ordinary strength, would produce very little effect, till something like reaction had been effected. Complete agues or rigors, this year, were very rare in any stage of the disease. Commonly, through the whole course of the disease, the surface, though not dry or husky, was seldom much inclined to spontaneous moisture. In a few instances however, there was a morbid, drenching perspiration. Sometimes, though rarely, the patient would complain of a general sensation of heat, though, to the feel of the attendants, he would be actually cold. Is not the heat, which has been often said to occur in some epidemics of this disease, either a transient flush, or the *calor mordax*, the stinging sensation merely, and not the actual augmentation of thermometrical temperature? If increased heat, and increased frequency of the pulse, are a part of the definition of fever, a great majority of the cases had no fever at all, but were merely an acute neurosis. At this day, however, it is well known that these symptoms are often absent in irregular pyrexia.

"The countenance, in most of the severe cases, had a kind of leaden hue, with marks of anguish. In some, there were patches of a bright flush, intermingled with other patches that were preternaturally pale. In a few cases, the pupils of the eyes were contracted, and in a few, dilated. In some cases, the organs of sight and hearing were irritable in the extreme; in others, they were equally torpid.

"There were two prominent varieties of the tongue, the contracted and pointed, and the dilated and flabby. The fur of the tongue assumed every possible deviation from health, and was of every conceivable variety, except that it never had the appearance which is usually found in synocha. In the course of the disease, red tongue was rather more frequent than any other. Two uncommon varieties of fur sometimes occurred, one of which was a greenish slime, and the other a mucus, varying in appearance, from moist brown sugar, to light coloured molasses. The former was rare; the latter, more common. Most of these varieties of tongue were liable to sudden changes in the same patient. In some of the protracted cases, there were aphthæ. A black tongue seldom appeared, and two or three instances of it only were noticed. On the whole, the state of the tongue was of very little service in diagnosis, or prognosis. In general, there was little or no thirst; but sometimes it was urgent. In such cases, it was generally aggravated by cold water, and palliated or removed by a persevering use of aromatics or alcohol.

"The stomach, on the one hand, was usually as torpid and inactive as a leathern bag, so that in many instances, the patient would choose scalding hot liquids; or on the other, it was irritable in the extreme. The change from one to the other of these extremes, was generally sudden, and occasioned by slight causes, or took place without any assignable cause. In the majority of the severe cases of sudden attack, unless the violence of the disease was immediately subdued by very energetic practice, torpor prevailed for the first two days; but for the succeeding three or five, the irritability would be so extreme, that without the nicest and most careful management, vomiting or retching would be incessant. The matter ejected generally consisted of little more than the drink, or secreted mucus. In a few instances, it was greenish; in a very few, dark coloured. Though in some instances this vomiting was very troublesome, yet there was never any bile evacuated, except in two or three patients that had long laboured under a chronic hepatic disease, or except as the consequence of an ill-timed emetic or cathartic. Indeed, the vomiting or nausea, in this disease, seemed ordinarily to be entirely symptomatic of an affection of the brain, or was obviously the effect of an emetic or cathartic, the sympathies being the reverse of sick head-ache. This was evinced by its being excited by raising or moving the head, or by placing the patient in an erect posture, and relieved, by a recumbent position; and especially, by blisters to the forehead, temples, and more particularly, to the vertex. Blisters to the region of the stomach alone, though of some service, produced much less effect in relieving this symptom.

"With the exception of the few cases that commenced with Diarrhœa, Cholera, or Dysentery, the bowels were naturally torpid. Ischury, from mere torpor of the bladder, was much more common, than in other low typhoid diseases. There was a profuse discharge of urine in a few cases. In general, in common with ordinary low Typhus of the *nervous type*, there was nothing peculiar in the appearance of this excretion. Indeed, the excretions were never more offensive, and usually much less so, through the whole course of the disease, than in health; and the alimentary canal was not disturbed by any thing which it contained *naturally*. The eructations and ejections of air had no peculiar, disagreeable odour, there was no fetor of the breath, and in all stages, as well at the bed-side of the dying, as at the access of the disease. *there was no febrile smell.*

"The condition of the brain, in this disease, was usually very similar to that state which is produced by exposure to carbonic-acid gas, or which is occasioned by excessive doses of some preparations of lead, or of certain essential oils, or of active and pure narcotics. In many cases it resembled concussion, or apoplexy, or palsy. In all the severe, and in a majority of the mild cases, there was from the very access, before a particle of medicine had been taken, *a peculiar deficiency of vital energy in the brain, and the whole nervous system*, so that raising the patient into an erect posture, would generally produce the same sort of vertigo, anxiety at the stomach, acceleration and irregularity of the pulse, nausea, and even fainting, which result from a similar position after a great loss of blood. In almost every instance, the patient was much more comfortable when the head was *low*; and much inconvenience, and even danger, was almost invariably occasioned from any other than a horizontal posture.

"The mind was more or less affected in every severe case. In the majority of such cases, after the patient was induced to apply for medical advice, there was a morbid fear, entirely independent of any existing urgency or danger of symptoms, and of any information respecting sickness and death in the vicinity. The public were not panic-struck, as the deaths were so few as to cause very little alarm. Fear, therefore, was rarely a predisposing or exciting cause in this town, though it evidently was in some of the adjoining. In some cases, there was a morbid clearness of intellect, attended with incessant loquacity, or there was too great watchfulness, and extreme restlessness; both of which states were always, sooner or later, followed by delirium or coma. Nearly every case of delirium alternated with coma, but every case of coma was not attended with delirium. In some cases, the delirium resembled intoxication; in many, Hysteria; and in others, it was of the low muttering kind, such as is common in ordinary low fevers. In some few cases, there was no other delirium than what was manifested by a false estimate of the disease, the patient, when in the greatest danger, instead of showing any signs of fear or apprehension, insisting that he was but slightly sick. In most cases which received early and judicious medication, delirium did not occur to any extent.

"Except where there are convulsions, or, in a very few instances, where something like maniacal exertion appears, or when the fever counterfeits Delirium-tremens, the affection of the brain in this disease, (unlike many head-affections in Pneumonia-typhodes, and common Typhus,) rarely produces any increased muscular strength; but on the contrary, it usually occasions great languor, and inability for muscular exertion, which is more especially manifested when the patient is in an erect posture. As has been before observed, this debility was a kind of paralysis, and appeared to arise from a partial extinction of the vital principle, more resembling the effect of excessive doses of the active and pure narcotics, or of a sudden and violent concussion of the brain, than the exhaustion of the latter stages of common fever. The exhaustion or deficiency of *vital energy* in both cases, appears to be the same, and the same proportion of the living principle is extinguished; only, at the end of protracted fevers, there is a great waste of the solids and fluids of the body, which must be repaired before much muscular strength is acquired.

"In many of the severe cases, the patient on going to sleep, would fall into a state resembling incubus, with difficult or partially suspended respiration, which would require his being awaked as often as once every five minutes; and some could not be allowed to sleep longer at one time for several days, without their spontaneously waking in the most excruciating fright and distress, and finding themselves greatly exhausted.

"During the progress of the epidemic, every variety of pulse occurred, except the *strong* and *hard*, and this often in the same patient. In many of the mild cases, and in most of the others, till the period of fatal sinking, it was rarely so frequent as in health; but towards the close of life, in several of the fatal cases, it was a hundred and twenty or thirty, and occasionally, a hundred and sixty in a minute. In less than twelve hours, it would sometimes vary in frequency from forty, to a hundred and thirty. In one instance, it was as slow as twenty-seven beats in a minute, and in six or eight hours varied to a hundred and thirty. This patient recovered so rapidly, that he was able to ride out in a week from his first attack. After the disease was fairly formed, whether it was moderate or severe, an erect or sitting posture would almost uniformly accelerate the pulse forty or fifty beats in a minute, and sometimes double its frequency, besides producing considerable irregularity. In a very few cases, the pulse was a hundred and twenty at the very first attack. The pulse alone, (as is the case with the tongue,) is a very deceptive guide in this fever. At various times in the course of this disease, and even in the dying, it would occasionally give a delusive feel of fulness and force, that often deceived the very best judges respecting the danger, unless attention was particularly directed to other symptoms. In such circumstances, in former epidemics, bleeding has been seriously proposed by a counsellor, while the attending physician knew the patient to be actually *in articulo mortis*. In other epidemics, in which this disease was mistaken for active inflammation of the brain, or for apoplexy, when the patient has been bled, death has ensued before the ligature could be taken from the arm. In most of the worst cases, the circulation was daily so languid by turns, that the extremities had a livid appearance, and were often nearly pulseless. One patient at least recovered, that was without pulse at the wrist for several hours. Some of the fatal cases were attended with a very distressing palpitation of the heart.

"A very prominent symptom, which occurred in some degree in almost every instance, even of the mild cases, and probably without an exception in all the severe, and happened in every stage, sometimes constituting the first access of the disease, consisted of paroxysms of *subsidentia*, or death-like *sinking* sensation in the epigastrium, that was described, sometimes as extreme distress, sometimes as a painful sense of vacuity and faintness, sometimes as trembling or fluttering, sometimes as real pain and anguish, and at others, was declared to be utterly indescribable. During the existence of these paroxysms, the coolness and numbness of the skin, the lividness of the extremities, the feebleness of the pulse, and the indications of distress in the countenance, were much augmented. Sometimes, these paroxysms of sinking, were attended with palpitation, and often with spasms; though spasms, tremors, and subsultus were not uncommon in every stage. In the mild cases, these paroxysms of sinking, occurred *regularly* in the morning; but in the severest, they were not confined to any particular hour of the day. Singultus was extremely rare, as also was indurated, inflated, or tympanitic abdomen.

" In many of those cases which were neglected, or treated with evacuants, or in which the early symptoms were not decisively and fully met and subdued by appropriate remedies, a peculiar and somewhat different, and usually irreparable sinking and exhaustion occurred, *after a critical effort*, or in lieu of a crisis, on the third, fifth, or more commonly, on the seventh day. In a few cases, it did not occur till the end of the second or third week. Under such circumstances, in addition to the sinking in common with other cases, the respiration was interrupted and peculiar, and much resembled that of the dying, or rather that of animals (as it is described) after a division of the *par vagum*, the inspirations occurring only at intervals of several seconds, and being usually long and full, while the expirations were so short, that the breath was parted with instantaneously. This *critical* sinking, in combination with morbid respiration, was often the first warning of danger to the patients and attendants, in the insidious cases, and it was almost invariably irremediable; for, although every symptom could be met, for a time, to the full extent, and although the most decided operative effects of medicine could be produced, and life often be prolonged for days, yet the weight of the disease could rarely be lessened, and, in one of the succeeding critical efforts, the same symptoms would almost inevitably prove fatal. In other fatal cases, the disease terminated in a deadly coma. Paroxysms of coma were periodical in some instances, as were those of sinking in others. The former description of sinking and anxiety, which was principally referred to the epigastrium, in distinction from the *critical*, may be termed *ordinary* sinking. It was usually relieved when taken in season, and treated with energy.

" Hæmorrhages were rare in this disease; but when they did occur, they were mostly fatal. One case of a child which died on the seventh day, was attended with symptoms of chorea. One or two cases were seen that resembled delirium tremens. Many had most of the usual symptoms of hydrocephalus internus. Several retained their habitual relish for strong tea, snuff, and tobacco, through the whole course of the disease. Milk-porridge, or broth, was the food that generally sat easiest on the stomach.

In a few cases, there was a strong disposition to eat heartily of solid animal food. In those in which this appetite was moderately indulged, it seemed to digest properly; at any rate it produced no sort of inconvenience.

"In opposition to ordinary fevers, in this disease the symptoms were generally much more urgent and severe in the morning, than in the afternoon or evening; that is, the patient was most dangerous during the remission. The reaction of the exacerbation in the afternoon, though it did not reach the standard of health, and could not even be considered as reaction at all in common fevers, made the patient comparatively easy. When there was a resolution of the disease at its outset, a relapse would infallibly supervene suddenly, upon any considerable irregularity of diet, exercise, &c. within the first week; but when the disease had once run its course, there were very few relapses during convalescence. There were several repeated attacks, after the most perfect recovery; and several of the patients had had the disease the preceding year. Critical periods were most prominently observed. When a case was protracted longer than five or seven days, as in the last stage of almost every acute fever, the disease appeared, though still more liable to severe and fatal sinking at the critical periods, not very unlike common low typhus, in which delirium, tremors, subsultus, coma and sinking occur; and was not easily distinguished from it, especially by counsellors, who could not witness its whole course."—pp. 7—14.

Treatment. Dr. Miner speaks in the most unqualified terms of the injurious consequences resulting from the use of emetics, cathartics, and all the evacuating and debilitating medicines. "Copious evacuations," he says, "invariably rendered the mild cases severe, and the severe ones fatal. Probably more than three-fourths of the fatal cases were the consequence of spontaneous or factitious purging or vomiting." So injurious does our author represent these medicines to have been, that he asserts even the mildest laxatives were frequently not unattended with danger; "one patient was even seen, who sunk irretrievably by a single operation of an enema." Most of the cases were however slightly purged with calomel, so administered as not to operate before twelve or eighteen hours—and this, accompanied with a diaphoretic regimen, in mild cases would lessen, and frequently remove all morbid action. In the severe cases, *opium* was the remedy almost exclusively relied on.

"Opium was the most important remedy in the severe form of this disease, and was, in such cases, *regularly* administered from the very first visit. A few cases imperiously required half an ounce of the tincture in an hour, or half a dram in substance, in the course of twelve hours, before the urgent symptoms could be controlled; and even some cases required a dram in the same time. All these patients recovered. In nearly every fatal case of this year, there were circumstances to prevent a free use of medicine. *The whole of those patients, whose symptoms were promptly met with opium, invariably recovered.* Opium enough, assisted by external applications, would command every peculiar symptom, with as much certainty, as any effect can be promised from medicine, except the extreme sinking, after a critical effort, in a neglected, or ill-managed case; and even in this forlorn state, it always mitigated much of the anxiety and distress, and prolonged life. Many other articles, however, were very useful in the course of the disease."—p. 16.

Of the other remedies used, Dr. Miner gives us the following account.

"Alcohol was highly beneficial in some cases, and required to be employed freely in many, but it seemed not to be equally adapted to all, and on the whole, was of much less importance than opium. Wine seemed totally unfit for the severer cases. Lytta and capsicum internally, were very serviceable in the torpid cases, but were entirely unmanageable, and greatly increased the irritability of most of those which were previously irritable. Arsenic, (Fowler's Mineral Solution,) was highly serviceable when the head was very much affected, and the stomach at the same time torpid. In some irritable cases it answered well, but it was necessary to adjust the dose very accurately, in order to have its full effect on the one hand, and not offend the stomach on the other. In these cases, however, it agreed better than any thing else, except opium, or perhaps alcohol and aromatics. Delirium, resembling mania, was occasionally relieved by tincture of stramonium, combined with tincture of opium. Camphor and ammonia answered a good purpose in the more moderate cases, but were worse than nothing in most of the severe. Ether was of no service for permanent support, but was occasionally very useful during the sinking paroxysms. The same was the fact with peppermint, and other essential oils. Oil of turpentine was not used internally. Cinchona, and the other *vegetable bitters and tonics*, did not the least good in the severe cases. They were too slow in their action to produce a perceptible effect, till after a crisis, or in the protracted stage of such cases as assumed the form of common typhus. After convalescence commenced, they were often useful to assist in retaining the ground which had been gained, and to accelerate recovery. In these instances, if the stomach was irritable, sulphate of quinine was preferable to any other preparation of cinchona.

"In all the varieties of this disease, internal medicines were greatly assisted by external applications, which were adjuvants that could never, with safety, be omitted. When it was practicable, the early use of the *hot-bath* was of great service, and it was much to be regretted, that it could not be oftener employed in the first stage. Warm or tepid bathing was rather injurious. The water should be so hot, as to make as strong an impression as can be borne without danger of scalding. When strong, and at the same time quick rubefacients were required, bottles of hot water, heated bricks or wood, hot spirits, mustard, liquor of ammonia, capsicum, and oil of turpentine, were important agents. Epispastics of cantharides would produce no effect, in many cases, till the skin had been first excited in this way; but as soon as the susceptibility of the patient was raised, by internal and external means, to the blistering point, the freest application and repetition of them, was attended with the most obvious beneficial effects. They were more especially useful to the *shaved vertex*, forehead, temples, spine, epigastrium, and extremities. In every case, (the very mildest are not with safety excepted) the forehead, and in the severe, the vertex should be immediately blistered. Shaving the head, and blistering it early, is more serviceable than any other external application. Torpor of the bladder almost invariably yielded to sinapisms, or more especially to blisters on the inside of the thighs. So sensible were those patients who had their reason, of the beneficial effects of blisters, that they frequently begged to have them repeated. To one patient, more than twenty blisters, and to another, more than thirty were applied during the course of this disease, and evidently with the greatest advantage. *Oil of turpentine, warmed, and confined to prevent evaporation, was the speediest epispastic*, and was of much benefit in coma. In a very few cases, there supervened such a peculiar irritation in the latter stage, that blisters required to be repeated with caution, on account of strangury, as this symptom, in irritable cases, sometimes increased the morbid action. It always lessened it in cases of torpor. In no other disease is it so essential to distinguish counteracting from coinciding agents. But after all, in the severest forms of the disease, *opium*, *alcohol*, *arsenic*, *aromatics*, *and external applications*, with no other medication, might be depended upon.

"In the mildest cases, after cautious purging with calomel, the prescriptions were almost negative; such as to avoid vegetable acids, cold water, muscular exertion, an erect position for any considerable length of time, much purging, and various other hurtful measures. Numbers of cases might be stated, in which the patients, while labouring under an apparently moderate disease, from a false idea that they should gain strength by sitting up, have produced the most dangerous paroxysms of vertigo and sinking, some of which have been followed by death. Many of the severest cases did not admit of being moved from their beds for several days; since the slightest motion, or change of position, was liable to produce a severe paroxysm of sinking, and increase the exhaustion to such a degree, as to require hours to regain the ordinary strength. Some slight cases might be trusted to aromatic, bitter infusions, alone; others to camphor and ammonia. In several of these, no calomel, or opium, or alcohol, or any active medicine, was needed or employed, provided all hurtful measures were studiously avoided. In many, a blister to the forehead, serpentaria, camphor and ammonia, compound tincture of cinchona, and opium in very small quantities, were all that were required.

"Profuse sweating from external heat was useless in the mild, and inefficient, or injurious in the worst form of the disease, unless employed at the very access; and in this stage, it could rarely be used with convenience. By the time a physician is called, it is generally too late for sweating to be of much service; though, when employed very early in cases of *sudden attack*, it is sometimes capable of breaking up the disease, especially in the torpid variety. Under such circumstances it ought generally to be tried. The duration, severity, and mortality of this disease, depend more than any other, upon the early management.

"On the whole, it must be repeated, the epidemic afforded the most decisive evidence, in favour of the efficacy of a free use of opium, when employed in season, for the removal of coma, and other atonic affections of the brain. When the early treatment was efficient, there was sometimes a resolution in twenty-four hours, or the disease rarely lasted longer than five or seven days; but when the practice was so timid and inert, as only partially to meet the symptoms, if the patient did not immediately sink, it was generally protracted somewhat in the form of common typhus, fourteen, or twenty-one days, and in some few cases, four or five weeks." p. 18.

Having given an account of the symptoms and treatment, Dr. M. next inquires as to the real character of the epidemic. Ordinary typhus fever it obviously was not. For a variety of reasons, which are given at some length, he contends for its identity with the spotted fever which prevailed in Hartford in 1809.

"The peculiar and extreme deficiency of vital energy in the brain and nervous system, from the very access of the disease, *without any appreciable reaction during the whole course*—the early urgency of the symptoms—the constant liability to coldness of the extremities, and numbness of the skin—its degree of insusceptibility to the action of strong rubefacients and blisters—the peculiar distressing and death-like sinking in the epigastrium—the craving of hot liquids—the alternation of extreme torpor and excessive irritability of the stomach—the great liability to sudden and irremediable sinking—the respiration resembling that of animals in which the *par vagum* has been divided—the immediate exhaustion produced by an erect position—the delirium resembling intoxication, (when neither alcohol, opium, nor any other medicine had been used,)—the extreme variableness and irregularity of the pulse, particularly its occasional deceptive fulness and force, when the patient is in the most alarming state of exhaustion—the very rapid progress of the disease—the impunity, at least, with which the most extraordinary doses of opium were borne, (which must be acknowledged by all, from the unparalleled success of the practice, whatever may be realized of its necessity and advantage by those who did not watch the whole progress of the cases,)—the injurious effects of free evacuations, whether spontaneous or factitious—the general inefficacy of all medication to gain a hair's breadth upon the disease, when, from neglect or bad management, the patient had once sunk down at a critical period, though perhaps the same degree of exhaustion might not have been very alarming at the crisis of any other ordinary fever, and though individual symptoms might be capable of material palliation—the absence of febrile smell, and indeed, of any uncommon fetor of the excretions—all mark the identity of the disease with the Hartford spotted-fever of 1809, and evince its diversity from common typhus or nervous-fever. From these considerations, it is believed, no one will hesitate to admit that this disease, at least as respects the severest and most sudden cases, was genuine spotted-fever, and that it was essentially different from common typhus. Indeed, the two diseases differ so much, especially during several of the first days, that the best treatment of common nervous fever, would prove fatal in every severe case of spotted-fever. With the utmost confidence it is asserted, that by the experienced, they might be always discriminated, and therefore should never at this late day, be mistaken or confounded together. It is true, that in a great majority of the cases of this year, the disease was less violent, and more manageable than the spotted fever of 1809, and indeed, than it was this same season in several adjoining towns. The only difference appears to be, that the mild and insidious cases, were in a much greater proportion this year than formerly. The cases of sudden attack were identically the same as those of 1809, and *all the others* were clearly varieties of the same epidemics. But this is a point of difference which existed to an equal degree between several of the different cases of both epidemics. Why may there not be prominent varieties of spotted-fever, as well as of common typhus, yellow-fever, cynanche-maligna, pneumonia-typhodes, dysentery, &c.?

"This disease, however, was peculiarly distinguished from every other, by the early paroxysms of sinking that attended it, by the entire absence of the stage of reaction, which is so essential to ordinary fevers, and by the great effect which opium had in mitigating all the dangerous symptoms of *every stage*, but more especially, irritability, delirium and coma. In every instance, except after the fatal sinking of a critical period, provided a sufficient quantity could be swallowed, or recieved and retained by enema, (which latter, in some few cases, was the best way of administering it,) it seemed to be invariably capable of obviating the symptoms in question.

"In common typhus, whether of the nervous or putrid type, even after a critical sinking, we can, in general, not only call the remaining excitability into action, but as is evident, actually produce a new secretion of vital power. But this can rarely be done, after the critical sinking of the worst cases of spotted-fever. If, therefore, we have not produced an early change, or begun thoroughly with a much more energetic course, than similar symptoms in ordinary typhus would demand, or even justify, our prospect of success is small. In the sudden attacks of the severest cases, which rouse all our energy, and usually make us even more successful in this disease than in ordinary fevers."—pp. 19–21.

We have now presented our readers with such copious extracts from Dr. Miner's pamphlet, as we think will enable them to form a judgment for themselves, in relation to the disease which it describes.

Art. III. *A Lecture delivered at the opening of the Medical Department of the Columbian College, in the District of Columbia, March* 30, 1825. By Thomas Sewall, M. D. Professor of Anatomy and Physiology. Washington. pp. 80.

This is a very able and interesting discourse, containing much information that is both curious and valuable, interspersed with many judicious and pertinent reflections, and written in a style at once unassuming, chaste, and vigorous. Its character and objects, it may hence be inferred, differ essentially from those of the mass of lectures which, under the title of *introductories*, are annually delivered in some of our older medical schools, and which, on suitable occasions, are issued from the press, in order to instruct the profession in the superior claims of the writers, and of the institutions with which they are connected, to the exclusive admiration and support of the public. That they fail in their intended effect, and frequently produce a decidedly opposite one, will not be matter of surprise to those who have subjected these productions to the test of an impartial, but strict criticism. The vapid and inflated style—the ostentatious and haughty display of vain pretensions and unjust claims—the gross inaccuracies in language, and the frequent unblushing plagiarisms with which they abound,—are sufficient to excite general disgust, and overwhelm their authors with merited contempt and marked unpopularity. Is it difficult then, to assign a cause for the diminished number of pupils who attend to the *ex cathedra* instruction of such teachers, or for the utter want of reputation and character under which their schools are doomed to languish, and pine away into insignificance? Let a different course be pursued: let talents and worth be fostered; let a liberal policy be exhibited in word and deed; let the interests of the profession at large be made the paramount object of ambition and policy, and a regeneration will not be slow in completion. Until such a change has been effected—until the system has been cleared of the mass of prejudices and selfish interests with which it is infested,—it is in vain to expect improvement and prosperity. Boisterous declamation, insidious menace, pompous exultation in fancied superiority, and cringing flattery, avail not. Radical reform is necessary—and without it, hopeless is the fate, and dreary the prospect, of misguided ambition and monopolizing selfishness.

To return to Dr. Sewall's excellent discourse. The subject selected for discussion is the early history of medicine, and of medical schools in the United States; and a more happy and interesting theme could not have presented itself to a lecturer in this country, nor one which, at a future period, will be more likely to awaken the curiosity and arrest the attention of the learned inquirer. Dr. Sewall thus enters, after a very few preliminary observations, on his subject:—

> "On looking back upon the early history of our country, our attention is arrested by the extraordinary fact, that more than a century and a half elapsed after its first settlement, before a single institution existed, either for the education of physicians, or the regulation of the practice of medicine.
>
> "Early and ample provision was made for the purposes of general education. Schools and Colleges were established; many able politicians, accomplished civilians, and learned divines, were produced; while scarcely a scientific physician was to be found, excepting such as had sought an education in the schools of Europe, or had emigrated to this country from abroad.

"This fact is the more remarkable, since our ancestors must, from repeated ravages of fatal diseases among them, have learned the importance of education, in directing a profession so intimately connected with the preservation of human life. Yet, when we consider the objects for which they emigrated, and the extraordinary circumstances that attended them, we shall find a satisfactory explanation, if not a full apology, for their disregard of medical science.

"No other colony was ever planted in a foreign country, composed of individuals of the same character, actuated by the same motives, and governed by the same policy, as that which first settled America. Our ancestors did not come hither for the purposes of monied speculations, or scientific research. Neither the love of money, nor the acquisition of knowledge, could have induced them to separate from relatives and friends, the comforts of domestic life and civilized society, to encounter the perils, the labours, and privations, that awaited them on the hostile shores of a savage wilderness. A zeal more pure, and a spirit more elevated, inspired and sustained them. It was the great master principle of religious liberty and religious reformation, that enkindled the zeal of our fathers, directed their course, and bore them on to this western world. A principle, the effects of which have descended to us, and are still visible in every part of our country.

"It is not strange that, under such circumstances, the interest of the church should have predominated, and have given a leading character to all their institutions; while medicine and other branches of science were regarded as subordinate objects, and left to be developed by the future necessities and resources of the country.

"Other causes, no doubt, had an influence in retarding the progress of medical science, during the early part of our history. A new country is not favourable to the improvement of science, and particularly to a science which more than any other is founded on observation and experience. The general health that prevails, the scattered state of population, and above all, the poverty which renders it necessary for every one to provide for his wants with his own hands, while they damp the ardour of inquiry, preclude the possibility of accurate and extensive observation. The depressed state of medical science which marked the period of the emigration, may be regarded as another cause that retarded its progress for many years in this country.

"Our ancestors lived long enough in Europe to imbibe something of the genius of their native country, and the spirit of the age. This was then a country whose medicine had scarcely emerged from empiricism, and an age still abounding in superstition. It was not to be expected that they should bring with them a high respect for a science, or an ardent devotion to its interest, which had been but little cultivated, and which at that period was extremely limited and hypothetical. The discovery of the circulation of the blood by Harvey, and the course of the chyle by Aselius and

Pequet, had been scarcely promulgated, when our ancestors embarked for America; and the labours of the Monros and the Hunters, as well as the improvements of the anatomists, physiologists, and surgeons of France, which have reflected so much light upon the science, were effected long after this period. Nor was it till since our ancestors left Europe, that the great medical schools of Edinburgh, London, and Paris, acquired that celebrity, and exerted that influence on the science, which has been so extensively experienced through the world during the last century.

"When we consider, then, the object for which our ancestors emigrated to America; the difficulties they had to encounter; the state of the country to which they came; and, above all, the depressed state of medical science throughout Europe at the time, it is easy to explain their disregard of medical education, and its slow progress for many years that followed." —pp. 4–7.

As far as the few records now in our possession, aided by tradition, go, it appears that the first persons who practised the healing art in our country were clergymen. "For many years," says Dr. James Thacher, in a letter to the author, "after the first settlement of the country, it was deemed indispensable for clergymen to acquire a knowledge of practical medicine, to discharge the duties of piety and humanity to their suffering brethren; and though they were not endowed with high attainments in medical science, they were, nevertheless, qualified for great usefulness in their respective stations. Altogether unlike the ignorant empirics of later times, they were actuated by the purest motives, and the highest considerations of benevolence. By their amiable manners, zealous attention, and pious converse, they endeared themselves to their people; mutual attachments were formed, and the fullest confidence reposed in their skill." We recommend the attentive perusal of this extract to our professional brethren, not only on account of the merited tribute it conveys to the worth of a useful and virtuous class of our predecessors, but because it conveys a valuable lesson in medical ethics.

Not to practice alone did the clergy confine themselves; they entered the lists of medical authorship, and had the honour of writing the first treatises on the diseases of our country. "A Brief Guide in the Small-pox and Measles," was the first publication issued from the medical press of America.

This was in 1677; and it was the production of a learned divine of Boston. The second medical work which appeared here, was also written by one of the same profession, and was an essay, entitled "A Good Management under the Distemper of the Measles." Excepting this class of practitioners, there were few well educated men employed in the profession; and it was not until the formation of the literary colleges at Cambridge, Yale, and in Virginia, that things assumed a more favourable aspect. Graduates from these seminaries occasionally turned their attention to medicine—went to Europe to receive their professional education—and formed a respectable corps of well-informed and enlightened physicians. With these were mingled foreign practitioners, who at times were induced to emigrate to this country, and make it their permanent domicile. The following was the state of the profession at this period:—

> "In those days it was not uncommon for a skilful surgeon to ride one, and even two hundred miles, to amputate a limb, or reduce a dislocated shoulder, while patients for more difficult operations were compelled to cross the Atlantic; and at this period females were the only accoucheurs of the country. No medical schools for the education of physicians had been established; and such a thing as a respectable medical library did not exist. The works of Sydenham, Boerhaave, Van Swieten, Mead, Brooks, Huxham, Cowper, Keill, Douglass, Heister, Ledran, and Lewis, were almost the only authors that were known or studied in America; and these were seldom found in the same collection."—p. 11.

For a century and a half no improvement was discernible in the condition of medicine. Insulated instances of physicians no less eminent for their literary attainments than for their practical skill and extensive experience, were not wanting to illuminate the general gloom which hung over the prospects of our science. Of these, Dr. Sewall has collected, from various sources, highly interesting notices in the notes appended to his discourse. The names of many must be generally familiar to the medical student in this country; as, John Mitchell of Virginia, who wrote an essay on the yellow fever of 1737–41–42; Dr. Zabdiel Boylston of Massachusetts; Cadwallader Colden of this State; William Douglass of Boston; John Lining of Charleston, S. C.; Tennant, Redman, Bond, Gardner, Ogden, Maclurg, &c. &c. A large portion of these physicians were natives of Great Britain; but as they passed their lives in these provinces, and as their works relate chiefly to the diseases of this climate, they are justly claimed as ornaments to our own early medical literature.

We now arrive at a more important period, when the first germs of our present extensive system of medical instruction by public lectures began to make their appearance. The first attempt made to establish a medical school in America was in 1765. Courses of lectures had been previously delivered at Newport in Rhode-Island, but they were temporary, and soon given up.

In 1765, Drs. Shippen and Morgan laid the foundation of the Philadelphia school. It is somewhat remarkable that both these enterprising physicians were not only natives of this country, having been born in Philadelphia, but received their literary and classical education at home. Their medical education was completed in Europe, under the most favourable auspices, and there they jointly concerted the plan of founding a medical school in their native city. Dr. Shippen commenced his course of lectures on Anatomy and Midwifery in 1762, and continued them annually until he was joined by Morgan in 1765; when the Trustees of the College of Philadelphia, concurring in the laudable design of these enlightened medical friends, established the medical school under their own immediate authority.

The second medical school established in the United States, was that of this city, founded under the charter of King's College, in 1767. The Professors were, Drs. Clossey, Jones, Middleton, Smith, Tennent, and Samuel Bard.

The next school was that of Harvard College, established at Cambridge, Massachusetts, in 1782. We subjoin the following interesting detail respecting its origin:—

> "This school probably owes its origin, in some degree, to the revolutionary war; an event which, though it suspended for a time the progress of the two schools already existing, seems to have contributed more to the

advancement of medical science, and its general diffusion through the country, than almost any other that has occurred in our history.

"The formation of an army collected together the physicians from every part of the country, promoted social intercourse, and opened a new field for medical investigation. Military hospitals were established for the reception of the sick and wounded; new forms of disease were developed; many important operations in surgery were performed; and frequent opportunities presented for the cultivation of practical anatomy, to those who had never before witnessed a dissection. At the close of the war the physicians and surgeons returned home, carrying with them the spirit they had imbibed for medical investigation, together with the results of an extensive experience: and thus was disseminated through the country, a fund of practical knowledge, and a taste for medical inquiry, which was never before known, and which no other circumstances could have produced.

"It was soon after the army was encamped at Cambridge, and a military hospital opened in that town, that the medical school of Harvard was first organized, and the plan laid for a course of public lectures. This event seems also to have been hastened by the anatomical lectures of Dr. Warren, which had been delivered in Boston the two preceding years, and which the students of the University had liberty to attend. In the commencement of this school three professorships were established, and the late Dr. Warren, Dr. Waterhouse, and Dr. Dexter, appointed to fill the chairs. Under this organization, a course of lectures of about six weeks' continuance was given, annually, for twenty-eight years."—p. 19, 20.

The *fourth* school is that of Dartmouth College, at Hanover, in the State of New-Hampshire, instituted in 1797. This was founded by the enterprise of Dr. Nathan Smith, one of the most eminent surgeons of which our country at this day boasts. "In 1798 he was appointed sole Professor of the school, and for twelve years gave lectures on the different branches of midwifery, excepting two courses, in which he was assisted in the department of chemistry."

The fifth medical school is that of Baltimore, regularly organized in 1807, and owes its origin to Dr. John B. Davidge.

Dr. Sewall next proceeds to notice summarily the more recent institutions—at Fairfield in this State; at Yale College; at Cincinnati; at Castleton, Vt.; at Lexington, Ky.; at Brunswick, Maine; at Providence, R. I.; Pittsfield, Mass.; Charleston, S. C.; Jefferson College, Philadelphia—making in all sixteen; to which if we add the one established at Washington, in which Dr. S. himself is Professor, and the one recently established at Troy in this State, we shall have *eighteen* Colleges for instruction in medicine in this country—a pretty large number, and showing, in a most decided manner, the ardor with which medical science is cultivated, and the numerical force of the profession.

From the notes and other data we gather that Philadelphia still retains her supremacy over every other institution in the United States. The old College has 450 students, and Jefferson College 110, making 560 for that one city. New-York has 164!—Baltimore, 300—Fairfield, 135—Lexington, Ky. over 200, &c. &c.—which will tend to show the relative estimation and standing of the schools. It requires no comment from us in this place, although, as citizens of New-York, justly proud of her pre-eminence in wealth and resources, we must lament the ill-fated inferiority in rank of our city institution.

Dr. Sewall next considers the history of medical societies in this country, which will be found interesting in detail. He then observes:—

> "Besides our medical schools and medical societies,—dispensaries, hospitals, infirmaries, and asylums for the reception of the poor, the sick, and insane, have been established in almost every part of the country. Several hundreds of these institutions, supported by public endowments, or private charity, are found in the United States; and, while they afford means of protection and relief to a large portion of the helpless and suffering part of the community, they furnish ample opportunities to the medical student to investigate the causes and nature of diseases, and become acquainted with the operation of remedies; thus uniting the objects of humanity and the advancement of medical science.
>
> "This is not all that has been done in America for the interest of medicine. We have already produced some of the best works of the present day, on anatomy, surgery, the theory and practice of physic, materia medica, pharmacy, chemistry, obstetrics, and medical jurisprudence; works which have not only been adopted as the text-books of our own schools, but have been republished abroad, and received the highest commendation of European professors. Our periodical journals, of which we have no less than twelve published quarterly, or at shorter intervals, besides hospital reports, and the transactions of medical societies, abound with original papers and many of them of great value.

> "It must be gratifying to every American to know, that the medical literature of the United States is, at this time, sought for and read with avidity in every part of the civilized world; while much of it is translated into the French, the German, and Italian languages, and republished in the journals of those countries: the highest compliment that could be paid to the genius and industry of our physicians."—p. 32, 33.

The prospects of the profession are thus sketched:—

> "While such motives as these call on us for renewed and vigorous exertions, an animating prospect presents itself to our view. Medical science in the United States is already beginning to assume a national character. The uniformity of our medical schools; the co-operation of our medical societies; our text-books, adopted as the standards of education in all our institutions; our periodical journals, which convey the same intelligence throughout the country; as well as the genius and constitution of our government, are all tending to such a result. We have before us a country unexplored, almost boundless in extent, and inexhaustible in its resources. A country possessing every variety of climate, and consequently calculated to develope every form of disease. A soil abounding in medicinal plants and minerals, which chemistry has not yet analyzed, and but few of which have been applied as medical remedies. With such a field before us, what claims have not humanity and science on our best exertions; and with well-directed efforts, aided by the light that now beams upon us, what may we not hope to accomplish!
>
> "If, in sixty years, with the limited means we have possessed, and with all the difficulties we have had to encounter, we have produced the best system of medical education, the most perfect code of medical police, that has been exhibited to the world; if we have produced some of the best practical and elementary books, and some of the most eminent physicians and surgeons of any age or country; if we have done this, in the short period of sixty years that are passed, what will be our advance in sixty years to come? May I not, with propriety, to use the language of a distinguished scholar of our country, say on this, as he has done upon another occasion,—'He who shall stand where I stand, sixty years hence, and look back on the present condition of medical science, from a distance equal to that from which we contemplate the founding of the first medical school in America, will sketch a contrast far more astonishing, and will speak of our times as the day of small things, in stronger and juster language, than any in which we can depict the poverty of the science in the days of our fathers.'"—p. 35–37.

The discourse closes with some pertinent remarks on the origin, design, and prospects of the Washington school. We have extended this notice so far, that we have not room for this portion of the address. Our most heartfelt wishes attend its success and permanent prosperity; and its situation is well calculated to ensure to it both.

Before closing, we must not omit to notice the valuable information scattered throughout the notes appended to the work; and we again repeat the expression of our warmest approbation of the literary and professional merits of this very able discourse.—*O si sic omnes!*

Medical and Philosophical Intelligence.

FOREIGN.

ANATOMY AND PHYSIOLOGY.

M. Defermon on the Section of the Pneumogastric Nerves.—We think that the following conclusions of the learned Editor of the Bulletin, are more likely to prove correct than those of Dr. Wilson Philip upon the same subject. From experiments on various animals, M. Defermon says, he has uniformly observed that there was little difference in the duration of life, whether the continuity of the nerve was re-established after its section by means of a good or a bad electric conductor, or whether it was not established at all. He also uniformly observed:—

1. That in the two cases, digestion always took place, and that the differences of digestion and respiration seemed to be proportional to the sufferings the animal had undergone in the operation.

2. When digestion appeared to be most advanced, the animal had sustained the least injury from the section; and large animals lived longer than small ones, which were very speedily seized with asphyxia.

3. The more the lungs are gorged with blood, the more rapid is the asphyxia, and the less advanced is digestion. That is, the alimentary substances in the stomach are very little altered, and little moist, inducing us to think that the fibres of the great sympathetic running to the stomach, must have some influence upon the quantity of the gastric fluids, which, according to the experiments of MM. Leroyer and Prevost, are indispensable to digestion.

4. Mechanical irritation of the inferior part of the pneumogastric nerve did not appear to accelerate digestion; or render it more complete.

5. In causing a galvanic current to pass after the section of the pneumogastric nerves, the gorging of the lungs is retarded, and the food contained in the stomach is sensibly different from that in the stomach of animals, on which the section has been performed without the galvanic current.

6. All these circumstances, important as they seem, are only accessory: the real differences depend on the quantity of gastric fluids flowing into the stomach; and the younger the animal is, that is submitted to the experiment, the more copious these fluids will be.

7. The wrinkles of the stomach indicate that much fluid is poured into it during digestion. We can at pleasure produce these wrinkles, by swallowing seltzer, or soda water, a fact which proves that they depend on the presence of the gastric juice.—*Anderson's Quarterly Journal.*

Experiments by Ficinus and Prinz on the Injection of Air into the Veins.—Professor Waldinger, in his Memoir, "Ueber die Nahrungs und Heilmittel der Pferde," has related many experiments, in which he injected various gases into the veins of horses, and other large animals, without much inconvenience. Oxygen and atmospheric air could be supported in a considerable quantity; azote and hydrogen produced more or less inconvenience; while carbonic acid gas always caused death. The text-books, however, continue to repeat, that air injected into the veins of animals uniformly causes death.

In order to establish the facts upon which this doctrine rests, Professors Ficinus and Prinz, of Dresden, repeated the following experiments. 1. On the 18th of December, 1824, at 4 o'clock P. M., they opened the left jugular vein of a horse, and injected, by means of a bladder and tube, 54 cubic inches (Paris measure) of atmospheric air. Before the injection the pulse was 44, and the respiration 18 per minute; after the injection the pulse rose to 67-68 and 70, and the respiration to 48. The horse was laid down, after which the respiration continued the same, but the pulse sunk to 57. The horse was raised, and remained restless, but gradually recovered; and by 10 o'clock, six hours after the injection, was perfectly well. 2. On the 28th of December, 1824, an equal quantity of oxygen gas was injected into the jugular vein of the same horse, when the pulse was 30, and the respiration 12 per minute. Immediately the pulse rose to 64, and the respiration to 40 and 44, with short palpitations of the heart. The animal, however, remained lively and well. An hour after the injection the pulse fell again to 38, and the respiration to 14; and in two hours the animal was in its natural state of health. Dr. Erdmann, who gives these details, does not mention whether the injection was made quickly or slowly, circumstances which would considerably affect the phenomena.—*Ib.*

Structure of the Nerves.—M. Bogros read a Memoir relative to the Structure of the Nerves, before the Royal Academy of Sciences. In this memoir the author observes, that two substances enter into the composition of the nerves,—the *neurilema*, composed of cellular tissue, and the *medullary fibre.* The ganglia were considered as composed of two parts: the medullary threads, in fact, penetrate into them, are stripped of their neurilema, are rolled up, and (as it were) united together by a particular substance, sometimes greyish, at others yellow or reddish.

M. Bogros subjected the nerves to new experiments; from which it results, that, independently of the neurilema and the pulp, a central canal is to be recognised. With the assistance of tubes, nearly resembling those by which mercury is injected into the lymphatic vessels, but with finer points, he succeeded in injecting the nerves. No preliminary preparation is required for the experiment; it was even performed upon living animals. The following are the principal facts related:—

When a nerve is pierced by the point of a prepared tube filled with mercury, the injection runs through all the filaments furnished by the nervous chord, to their farthest extremities: it may be traced in the papillæ of the skin, the mucous membranes, and muscles; the injection also extends itself towards the origin of the nerve; and, lastly, when thrown into a single filament, it always extends to several others, by means of anastomosing canals. If, after having injected the nerve, it is cut, a round and regular opening is to be observed in the centre of the pulp; and, even without the injection, if the centre of the pulp is carefully examined, an obscure point may be seen,—that is, the opening above mentioned; and, by placing the point of the tube in this place, the nerve is injected.

When a nerve is deprived of its neurilema by nitric acid, similar results are obtained: when, on the contrary, the pulp is destroyed by an alkaline ley, injection is performed badly; it stops, and does not present the same regular and cylindrical aspect. Lastly, if spirits of turpentine are injected, and the nerve is then dried, the structure of the canals is visible to the eye. Mercury flows through the filaments of the great sympathetic nerve, and shows canals similar to those found in the other nerves. Thus, an injection thrown into the inferior cervical ganglion has penetrated through the cardiac nerves to the heart; and, from the great sympathetic, it has reached the semilunar ganglion, and the branches that extend from it. When the injection reaches the ganglia, they swell, and present the appearance of a number of canals communicating with each other, and turned and twisted upon themselves. The injection of the intervertebral ganglia takes place in a peculiar manner: they swell immediately; afterwards the injection penetrates into the venous network, situated between their proper surface and the covering with which they are furnished by the dura mater, and thence into the veins of this membrane itself. At last, the injection is seen to pass across the roots, and to fall into the cavity of the dura mater; a result which arises either from ruptures easily made in this point, where the pulp is very soft, or from this effusion taking place through natural openings. An injection cannot be thrown into the roots, nor *a fortiori* into the spinal marrow: it could not pass above half an inch when the pulp was torn, from whence resulted an opening through which the mercury escaped. The injection penetrates into the veins sometimes, but never into the arteries or lymphatics. The anastomoses take place by the meeting of the medullary canals, or by a confusion of the pulps: where they take place, the nerve increases in size.

The injection has been performed on living frogs. At the beginning, convulsions were produced; when it was finished, a perfect paralysis was produced. These experiments have been repeated on the four classes of vertebrated animals.

In an anatomical point of view, this discovery is very valuable; physiologically, the existence of a canal in the nerves opens a vast field of inquiry; and as there is a law in the animal economy, that every cavity which is not lined by a mucous or serous membrane, is closed by an adhesion of its sides, if it is not preserved by the presence of some other body, is it not, therefore, probable that the medullary canal serves for a kind of circulation?—*Lond. Med. and Phys. Jour.*

PATHOLOGY.

On the Mean Duration of Intermittent Fever.—M. Bailly has read, before the Royal Academy of Sciences, a memoir on this subject, the result of a great number of observations collected in different climates,—such as Rome, Montpellier, Lyons, and Canada; and he gives a period of fourteen days as the mean duration of intermittent fever. The remarkable circumstance to be observed is, that this period is precisely that in which acute diseases run their course. This analogy offers another powerful motive to assimilate these two kinds of morbid affections; the identity of which is further proved by the traces of inflammation which are almost always found in the internal organs, as the consequence of intermittent fevers.

M. Bailly afterwards considers the physiological cause which determines a disease to prolong its course for a definite period of time. Inflammation, according to him, is not merely the result of an accumulation of blood in this or that organ; it consists in a fixed and permanent alteration of the diseased tissue, and this alteration can only be destroyed by those changes which nutrition determines; but, as these changes are necessarily slow and successive, it follows that every inflammation must occupy a fixed time to arrive at its maximum, and disappear. Experience can only determine how many organic changes are necessary to destroy that alteration in a tissue which constitutes a state of inflammation; and, if intermittent fevers take two weeks to be cured, it may be concluded that the internal organs, when inflamed, require that space of time to pass through those stages necessary to reproduce a healthy state. As to the singular tendency which the greater part of diseases have to run their course by weeks, there is nothing that need surprise us; since the organic movements of the healthy state present a similar course. The first dentition generally begins at the seventh month, the second at the seventh year. Menstruation is equally regular with regard to its septenary periods.—*Ib.*

Cure of a Hydrophobic Patient.—Professor Rossi has published a very interesting case, of which we here give the outlines; premising that, from the documents annexed to the Memoir, it would appear that every proper means have been employed to prove its truth and authenticity. A person, aged thirty-two, of a sanguine temperament, in excellent health, and of great liveliness, was attacked by a strange cat on the 22d of October, 1824, which fastened with its teeth on his left hand, until with the other, which received numerous scratches, he was at length enabled to drive it away. There were three wounds on the left wrist, two of which, from the teeth of the animal, had penetrated through the skin, and bled profusely; the other was a lacerated wound, about two fingers'-breadth in length, on the other side of the hand: the parts were merely washed with cold water. The cat belonged to a neighbour, and for two days had attempted to bite those who gave it food: it was killed on the following day, having all the symptoms of rabies. At the end of twenty-four hours, a surgeon cauterised two of the wounds, but very superficially; omitting, however, the third wound, which was the most extensive. Some days after, the patient called on Dr. Castagno, of Lanzo, who sent him with a letter to Professor Rossi, for his advice upon the case; in consequence of which, on the 19th of November, (that is, twenty-seven days after the accident,) the wounds were thoroughly cauterised again, and the sublingual glands were examined, in order that their subsequent condition might be watched. The patient was directed to take vinegar and the genista luteo-tinctoria, internally; of which he drank a glassful night and morning.

No alteration was perceived, either in the habit, manner, or health of the patient, until the beginning of December, when he began to be melancholy, to seek for solitude, and wept violently; his sleep was disturbed by frightful dreams, his appetite failed, and he disliked his wine, of which he had been before very fond;* his eyes glistened, his face was red, and his mouth was always full of saliva. The left sublingual gland was larger than the right, which continued in its natural condition; and he felt an itching in the part bitten.

On the 10th of December, the sublingual glands were cauterised, by the application of a heated iron button-cautery, three successive times, applied to each gland. The operation was very painful; three hours afterwards a smart attack of fever took place: rest, and a rigid regimen, were prescribed. At the end of six or seven hours, a grain of opium was given, by which he obtained three or four hours' sleep. The next day the fever, pain, and salivation, were diminished. The same means were employed, and the following day he was quite free from fever. Three or four days afterwards, he assumed his usual mode of life; and now enjoys the most perfect state of health.—*Ib.*

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* He afterwards said, that his aversion to water was at that time equally strong.

Diagnostic of Venereal Gonorrhœa.—The Baron Von Wedekind affirms, that the true diagnostic sign of the above disease being really the produce of impure connexion, is the appearance of two small lenticular knots, situated one on each side of the frœnum, immediately behind the orifice of the urethra; which little swellings may always be distinguished by the touch, and often by the eye. The Baron believes them to be small glands, and thinks that from them the contagion of gonorrhœa proceeds.—*Ib.*

Enlargement of the Heart.—A man, sixty-two years of age, came under Dr. Howison's care, on the 14th of January, 1823, complaining of uneasiness or dull pain at the lower part of the sternum, great occasional dyspnœa, especially when at stool, and aggravated at night, so that he is obliged to keep in the semi-recumbent position. He starts from his sleep, and has slight delirium at times. Countenance healthy, except a slight livor of the lips—lower extremities considerably œdematous—urine scanty and red—thirst, tongue foul—bowels costive—pulse full, and not above 30 in the minute, with irregularity. Reports that, for some months past, he has had severe palpitation of the heart. At present, it can merely be felt beating, and seems to labour in its function. He has enjoyed good health till within these three years. His complaint has rapidly increased since, by cold and fatigue, to which he had been subjected four months ago; says he has been much benefited by digitalis, blisters, and aperients. We need not detail the treatment, which did no good. He got daily worse, and expired on the 19th of the same month.

Dissection. Lungs healthy—half a pint of water in the right side of the chest—about six ounces in the left side—pericardium appeared very vascular externally, looking as if it had been covered with powdered vermilion —no water in pericardio—*heart three times its natural size*, and very vascular, having also the vermilion-looking surface, with scattered spots, resembling purpura. The right chambers were greatly enlarged, and the margins of the valve thickened and cartilaginous. In the left side, the parietes of the ventricle were natural—the mitral valve cartilaginous. Nothing is said of the size of this cavity. The morbid appearances in the abdomen were not important. The liver, however, was enlarged, indurated, and of a pale colour.

Dr. Howison seems to think that these morbid appearances do not account satisfactorily for the phenomena. We conceive that a heart enlarged to three times its natural size is no trifle. We have seen much less organic derangement than this produce all the symptoms above-mentioned, (excepting, perhaps, the remarkable slowness of the pulse,) and destroy life. Diuretics are the most important remedies in such cases, with constant counter-irritation over the region of the heart. Life may often be considerably prolonged in such cases by judicious treatment.—*Johnson's Medico-Chirurgical Review, October.*

SURGERY.

Tracheotomy in diseased Larynx.—A man, thirty-six years of age, suffered for several months, in the year 1820, with ulcerated sore throat, supposed to be syphilitic, and which was healed by nitric acid and small doses of mercury. The ulceration occasionally returned, and was removed by the same remedies. Latterly the membrane of the larynx had been frequently affected with inflammation, giving rise to hoarseness and some difficulty of breathing. At one period there was acute inflammation about the cricoid cartilage, which was relieved by leeching and blistering. Under pil. hyd. and decoctum sarsæ, he seemed to get well; but he became subject to violent paroxysms of suffocation, in one of which he seemed at the point of death, when a piece of bone was expelled through the glottis with great force. It appeared to have come from the triangular bone of the sternum, where there had been swelling and inflammation some time previously. After this, his voice and respiration improved. Fumigations of cinnabar and a course of the blue pill set his health up once more. But afterwards the paroxysms of dyspnœa returned, and became gradually more aggravated. In fact, the disease of the larynx gained ground, and our author began to foresee that tracheotomy would be the ultimate resource. Early on the morning of September the 25th, Mr. G. was summoned to his patient, who was reported to be dying. On arriving, he found him somewhat recovered from the severest paroxysm he had ever experienced; but still his breathing was laborious and difficult. Venesection had afforded relief. Mr. G. not being provided with a canula, was obliged to put off the operation till 3 in the afternoon, when he found his patient supported in a chair and quite insensible. No pulse could be felt at the wrist, and it was hard to say whether he breathed or not. His face was suffused with blood, and his lips livid. The trachea was instantly laid open by a longitudinal incision, and a circular piece, half an inch in diameter, was cut out by means of a scalpel. The air rushed in, and the patient's breathing quickly improved. After twenty minutes a canula was introduced, and caused much irritation at first, with a convulsive cough, which expelled much bloody mucus. This irritation became less and less, as the repetitions of the introduction took place. And in an hour he could bear the canula very well. This tube he wore more than six months, without inconvenience; he was then able to lay it aside, and his voice was quite restored. This is the second instance of a tube being long worn in the trachea. Mr. Price, of Portsea, has now worn a tube about ten years, and breathes almost entirely through it. He enjoys good health.

We expect to see the day when the operation will be often performed in ulcerations of the larynx, so as to give the said ulcerations time to heal, and the cartilages to exfoliate. We have no doubt that many cases of laryngeal phthisis might be saved by this operation. Ulceration of the larynx would heal, when the parts were quiet and no air passing, which would otherwise go on from bad to worse, and destroy the patient's life.—*Johnson's Medico-Chirurgical Review.*

Treatment of Ganglion.—Dr. Cumin, surgeon to the Lock Hospital, Glasgow, proposes an operation for ganglion, in some respects novel. The more usual method is to rupture the sac by a blow of a book or other solid body. But this, Dr. C. thinks is a clumsy and unsurgical proceeding. Our author's method is to draw the skin to one side, and then, by pushing in a cataract needle obliquely, to slit the sac of the ganglion freely. The skin is then to be brought to its natural position, forming a kind of valve, and the contents of the ganglion to be squeezed out into the adjacent cellular tissue. Pressure is to be applied; and when the fluid accumulates, it is again to be pressed out, and so on, till the secretion ceases altogether. A case is related in illustration, and our author informs us that he has since treated several others in the same way.

A nearly similar method is described by Jourdan. He directs the skin to be drawn to one side, and the cyst to be divided with the point of a lancet. The contents are to be squeezed out, and the skin to be brought to its natural site, so as to form a valve. Pressure is then to be made, and the operation to be repeated, if necessary. The only difference between these two surgeons consists in the form of the instrument and the disposal of the fluid. Dr. C. squeezes it into the surrounding cellular tissue—Jourdan squeezes it out altogether. Now as the wound is made on the same principle in both cases—namely, in a valvular way—we conceive that the fluid, in the first instance, might just as well be squeezed out, if it will come out easily, as into the cellular membrane in the vicinity of the ganglion. The two plans, however, are so nearly alike in principle, that it is not worth while to discuss the superiority of one over the other.—*Ib.*

THERAPEUTICS.

Virtue of the Black Pepper as a Febrifuge.—Dr. Louis Frank having invited the profession to try the effect of the extract of black pepper in intermittent fever, prepared by digesting, in a glass vessel, one ounce of the pepper in twelve ounces of distilled water, for thirty-six hours, in a water bath, and evaporating the liquor to the consistence of an extract. This remedy was tried on nine individuals, affected with intermittent fever of different types, in doses of four, eight, ten, or twelve grains, dissolved in water, in some cases, given in the form of pills in others, by Dr. Clock of Trent; and the effects surpassed his warmest expectations.

From these experiments, the Doctor concludes that the extract of pepper is not only one of the best succedaneums for the bark, but that it actually is very preferable to it, on several accounts: 1st. It never produces disturbance of the stomach or bowels. 2d. Because it never failed in producing its curative effect. 3d. Those who were cured did not, in any one instance, experience a relapse. 4th. It promotes a regular alvine discharge, as well as the excretions of urine and sweat. 5th. None of those who were cured experienced that sensation of languor so common to a state of convalescence.—*Ib.*

Poisoning by Arsenic and Sublimate.—A young pharmaceutical student, of sanguineous temperament and robust constitution, mixed up, in a fit of despair, a drachm of arsenic and the same quantity of oxymuriate of mercury, into ten boluses, nine of which he swallowed on the spot, and retained the tenth, to show the kind of poison he had taken, convinced that his death would be very sudden from the dose taken. It was not so, however, and in the space of five minutes, on feeling a burning heat in his bowels, he repented of the rash act, and quickly swallowed eighteen grains of ipecacuan, which caused the rejection of a part of the poison. The fear of death now induced him to cry out furiously for aid, and M. Julia-Fontenelle was instantly on the spot. He found the patient rolling on the floor, the picture of misery and terror. He frankly avowed all that had passed. Abundance of warm water was taken into the stomach, and black matters were vomited forth. These, on subsequent analysis, presented the poisonous substances swallowed. Several other medical gentlemen were now summoned to the aid of M. Fontenelle. Warm milk was thrown into the stomach in large quantities, and also into the bowels by injection. The patient experienced excruciating pains, and insatiable thirst. In four hours from the accident he had convulsions, and appeared at the point of death. In two hours more, however, he appeared a little better. A diarrhœa came on, which lasted eight days. Sugar and milk were assiduously administered, together with whites of eggs. *Next day*, face flushed, and countenance wild—abdomen extremely painful—constant vomiting, diarrhœa, and insatiable thirst, with convulsive twitchings. Milk still for drink—cataplasms to the abdomen—twenty-four leeches to the chest. *Third day*, the symptoms ameliorated—same treatment. *Fourth day*, the convulsive movements more strong—facies Hippocratica—frequent vomiting of green matters—violent colic and delirium—bled largely from the arm—warm bath—stimulating plaster to the epigastrium—large draughts of whey. *Fifth day*, no better—large blister to the breast—sinapisms to the legs. *Sixth day*, the vomitings less frequent—delirium milder. During the next two days, the symptoms still more favourable. Mercurial ptyalism and ulcers in the mouth—extreme debility. By the twelfth day he began to convalesce, and by the end of three weeks he was able to undertake a journey of 150 miles to his native air. He has since enjoyed good health, and is become robust. —*Ib.*

Treatment of Scrofulous Ulcerations.—Mr. Rennie wishes to draw the attention of the faculty to certain topical applications in scrofulous ulcerations. Having witnessed the beneficial effects of *pitch* as a stimulating and detergent application to foul and indolent sores of this nature, he was led to form it into a plaster of such consistency as to combine pressure with the peculiar qualities of the pitch.

"The following compositions, after experimental trials, have been found to combine, in the greatest perfection, the requisite qualities as above described:—

I. *Medium.*

"℞. Picis Nigræ, p. j.
——— Liquidæ, p. iss.
——— Resinæ, p. ij. M. ft. emplastrum.

II. *Soft.*

"℞. Picis Liquid. p. iss.
——— Nigr. p. j.
——— Rēsinæ, p. j. M. ft. emp.

III. *Hard.*

"℞. Picis Liq. p. iij.
——— Resinæ, p. iv. M.

IV. *Solid.*

"℞. Picis Nigræ, p. ij.
Emp. Resinæ, p. j.
—— Ceræ, p. iij. M.

"To be heated and spread at the time of application, not, however, too thinly. The best thickness seems to be from one to two lines." 194.

With regard to constitutional treatment in cases of scrofula, Mr. R. wishes to remark that, in his experience, the exhibition of calomel, in minute doses, frequently repeated, is an effectual and unsuitable method of procedure. "The mercurial not being in doses sufficiently active to carry itself off, or clear out offending matters, remains in the system exciting the mercurial irritation; and, notwithstanding a protracted course, accumulations of morbid fæcal matter are frequently found to exist." We are not advocates for allowing fæcal accumulations to take place; but we have seen so much benefit from small doses of mercury in improving the secretions, and in that way improving the general health, that we cannot consent to abandon the procedure, notwithstanding the respect we entertain for Mr. Rennie's opinions. We generally give some smart but unirritating purgative, every third or fourth day, while pursuing the alterative course, and thus avoid the chance of fæcal accumulations. But we must hear Mr. Rennie.

"It appears to me that the greatest benefit is derived from calomel, when prescribed in adequate doses to excite considerable activity both of the secreting and peristaltic functions, and followed, within eight or twelve hours, by such other aperients as completely to evacuate the intestinal canal.

"This active operation will not bear to be repeated oftener than once in four to six days. One advantage is gained by delay, that the constitution has time completely to recover from the mercurial irritation and the depressing effect of copious evacuation, whilst morbid accumulations are sufficiently obviated.

"So long as the discharges continue unhealthy, perseverance in aperient measures is the chief indication. To obviate unpleasant effects from the continued use of active mercurials, it is advisable, after the few first repetitions, to interpose mild doses of rhubarb and soda, or magnesia, prescribing mercurials only once in six to twelve days, as occasion requires." 196.

Our author throws out some judicious hints respecting the exhibition of mercurials in cold, and especially damp weather, in which seasons much inconvenience is often experienced from the use of calomel. It then frequently produces tormina and tenesmus, "in a manner so capricious as no foresight could anticipate." The distention of the alvine viscera, in scrofulous constitutions, is, in Mr. R.'s opinion, dependent on a peculiar disordered condition of the hepatic functions, "consisting not of acute inflammatory action, nor of permanent alteration of structure, but of vascular congestion and inactivity of the vital functions, dependent or diminished vital power, together with suspended, irregular, or depraved biliary secretion. It is in the power of correcting this condition of the alvine secretions that the beneficial effects of mercurials depend. Speaking of tonics, Mr. Rennie observes:—

"Notwithstanding the general debility so invariably attendant on the scrofulous state of the constitution, I am convinced that the administration of this class of remedies is much seldomer advantageous than is perhaps supposed. On the restoration of healthy hepatic and alvine functions, it is surprising how speedily the youthful constitution regains vigour, and every symptom of debility and relaxation disappears. As conducive to this effect, the sedative and invigorating influences of pure air, moderate exercise, equable and warm clothing, and generous diet, are unquestionably of the first importance. Where these requisites are possessed, tonic remedies are less necessary; and where these advantages are not enjoyed, they frequently do more harm than good.

"The system generally found most suitable, has been to administer an alterative mercurial every sixth night, and a full purgative next morning; for two days thereafter tonics; the third evening or morning a mild aperient of rhubarb, with alkali or magnesia; then tonics for two days, or, at most, three: after which, the alterative and purgative as before." 198.

Our author has found better effects from the sulphate of quinine, in allaying irritability, and "counteracting that febrile diathesis depending on stomachic atony," than from any other tonic at present known. We cannot follow Mr. Rennie through his detail of the local treatment of scrofulous sores, but refer to the paper itself for fuller information on that point. The communication is, upon the whole, creditable to the author.—*Ib.*

Sulphate of Quinine.—This invaluable medicine is daily extending in reputation, and will, we are convinced, soon become one of the most important in the Pharmacopœia. The great drawback is its excessive price, and therefore we were rejoiced to find announced in one of the foreign Journals, a mode of preparing the quinine and its sulphate, which will effect a great reduction of expense. M. Guerette, chief apothecary to the French forces, has discovered that, from bark, after it has yielded the infusion, decoction, and watery extract, almost as much quinine and sulphate of quinine may be obtained, as from bark that has *not* yielded the above officinal preparations. He was led to this discovery by observing that from the aqueous extracts of cinchona, little or no quinine could be obtained; hence it was evident that this valuable substance was left behind in the refuse. It is, indeed, extraordinary that chemists did not see into this before now, knowing as they did, that it required the strongest alcoholic menstrua to extract the quinine from the bark.

A commission has been ordered to examine M. Guerette's memoir, and repeat his experiments, and their report is confirmatory of his discovery. The formula is not yet published by M. Guerette; but we should suppose it cannot differ materially from that employed in obtaining quinine in the common way from unreduced cinchona.

The effect of the discovery on the price of the medicine will soon, we hope, be manifested both on the Continent and in this country.—*Ib.*

MEDICAL JURISPRUDENCE.

Feigned Diseases. Vomiting produced at will by Pressure on the region of the Stomach.—On board the Alkmaar hospital-ship in the Baltic, a patient laboured under such frequent and violent irritation of the stomach, as to induce a belief, at the commencement of the case, that considerable morbid action was going on in that organ. Particular attention, therefore, was paid to the man, and after a little time it was observed that the vomiting regularly occurred at certain periods, (namely, when the physician to the fleet was paying his morning or evening visit to the sick,) and that in the absence of the medical officers the patient ate his allowance of food without any vomiting being produced.

These circumstances excited suspicion, the patient was in consequence narrowly watched, and it was discovered that at the time of the expected visit, and before the *vomiting* commenced, he was in the habit of making violent pressure on the region of the stomach, with his hand applied under the bed-clothes. Measures were in consequence taken to secure his hands in proper time, the *vomiting* immediately ceased, and the imposture being detected, the man was soon dismissed cured.

I have since, says Mr. C. Hutchinson, the reporter of this case, become convinced, both from observation in my own practice and from conversations with other medical men, that certain persons do possess the power of thus exciting vomiting at pleasure, by means of pressure applied to the region of the stomach.—*Lond. Med. Journal, August.*

DOMESTIC.

Account of a case in which both carotids were successfully tied by Dr. Macgill of Maryland, in a letter from Dr. Joshua I. Cohen of Baltimore, to Dr. J. Kearny Rodgers of New-York.—I regret with you, that my friend Dr. Macgill has not made known his interesting operation of tying the two carotids. The patient was a female, with fungous tumours of both eyes, whether fungus hæmatodes or not, I am not now sure of. The eyes, however, were both destroyed, and presented an ugly confused mass, which protruded beyond the sockets, and the disease was increasing every day. From the success attending the operation of tying the carotid for tumours about the head, Dr. Macgill was led to adopt this plan in treating his patient, and finding the effect of tying one carotid to be limited to one tumour, he ventured upon the bold attempt of arresting the progress of the other, by cutting off also its supply of blood, which he did about a month after the first operation. It is some time since I heard of the patient, but several months after the last operation, she was doing well and the tumours subsiding. The case occurred near Hagerstown, Maryland, about a year and a half or two years ago. There were some interesting physiological facts observed during the progress of the case, which Dr. M. mentioned to me, but which I must pass by for the present, hoping Dr. M. will be induced to give a full account of every thing connected with this first attempt (I believe) of tying both carotids in the human subject."

An account of a new Instrument for the extraction of coins and other foreign substances from the œsophagus. By Nathan Smith, M. D. Professor of Surgery, &c. Yale College.—" I have twice been called upon to remove coins from the throats of children. In both instances, they had descended to near the inferior extremity of the œsophagus, where the passage is a little narrowed, just before entering the stomach. Of course, they were entirely beyond the reach of forceps, or any instrument which might be employed to grasp and thus withdraw them.

" The instrument which the exigencies of the case suggested, and with which I succeeded, was unlike any thing which I have known to be employed for a similar purpose. A very few words, with the acompanying plate, will be sufficient to give an ideá of it.

" The shaft of the instrument is a rod of whalebone, twenty inches in length, and of the size of a small quill. Half an inch from one extremity there are attached, at acute angles, like the barbs of an arrow, two wings of silver, an inch and a quarter in length, a quarter of an inch wide, and so thin as to be very elastic and flexible. The extremity, which stands off from the instrument, is convoluted so as to render it blunt, and is a little curved inward toward the shaft of the instrument. The two wings are pinned to the shaft of the instrument, and may be continued over its extremity, which should terminate with a bead, or obtuse point.

"From the position of the œsophagus between the trachea and spine, the faces of the coin present forward and back. When the instrument is thrust down the œsophagus, avoiding the glottis, as may be done without difficulty, and presenting the barbs one forward and the other back, it will pass either behind or before the coin, and the barb will spring beyond it, and catch it between itself and the shaft, when it may be very easily withdrawn. The manner in which the shaft is embraced by the œsophagus above, prevents its slipping off laterally. In both the cases alluded to, I accomplished the extraction of the coin without any difficulty, and at the first trial. In the second case, after I had once raised the coin into the mouth, the child instantly swallowed it again, though I had almost seized it with my fingers. It returned to the same place, and I again withdrew it at the first trial.

"The barbs are made so thin that should they catch in any of the follicles of the œsophagus, they would be everted sooner than rupture the membrane."—*Amer. Med. Rev. for Sept.* (See Plate I. of this number.)

Smith's new work on Surgery.—We have seen and read with great pleasure the prospectus of "A work on Surgery, selected and arranged from the lectures of NATHAN SMITH, M. D. Professor of Surgery, &c. in Yale College. By N. R. SMITH, M. D." It is proposed that the work shall embrace the following subjects: 1. Physiology of the circulating system, and the spontaneous stoppage of hemorrhage from divided arteries. 2. Amputation. 3. Fractures, with descriptions and plates illustrating splints constructed upon new principles. 4. Dislocations. 5. Necrosis. 6. White swelling of the joints; wounds of the joints. 7. Operation for Hydrocele. 9. The sanative powers of nature, and the abuses of surgery and physic from supererogation. Other articles will probably be added.

It is stated that the above selection has been suggested by the hope of being able to advance something original and interesting in relation to subjects which have been objects of particular attention with the author during nearly forty years of extensive experience in surgery. The work will be published in May or June next, provided a sufficient number of subscribers be procured.

Troy Medical Institution.—The public are respectfully informed that a Medical School is established in the city of Troy, New-York which will commence its operations this winter. In consequence of a negociation with the University of Vermont, the Degree of Doctor in Medicine will be conferred in Troy, upon such students as have complied with the usual prerequisites, immediately after each lecture term.

The following is the resolution of the University of Vermont:

" University of Vermont, *Burlington*, Oct. 8, 1825.

" *Resolved*, That the University of Vermont confer the Degree of Doctor in Medicine upon such Medical Students as shall hereafter, at the Troy Medical Institution, be educated in acquiescence with the general rules and usages of Medical Colleges in the United States; and that this resolution continue in force five years.

" Attest. J. N. POMEROY, Sec'ry."

According to the adopted Constitution of the Troy Medical Institution, the following gentlemen compose the Board of Trustees:

Joseph Russell, Chairman—Townsend M'Coun, Derick Lane, John Paine, Gurdon Corning, Daniel Sackett, Philander Wells, James Mallory, J. Van Schoonhoven, Isaac M'Conihe, Richard P. Hart, Orville L. Holley, William Bradley, Samuel M'Coun, John D. Dickinson, Esaias Warren, George Tibbitts, William Peirce. David Buel, Jr. Secretary—Samuel Gale, Treasurer.

The Board of Trustees of the Troy Medical Institution have appointed to the several Professorships as follows:

William Anderson, M. D. Professor of Anatomy and Physiology, and Lecturer on the Principles and Practice of Surgery.

Amatus Robbins, M. D. Professor of Theory and Practice of Physic and Clinical Medicine.

Elisha Sheldon, M. D. Professor of Obstetrics and the Diseases of Women and Children.

Joel B. Nott, A. M. Professor of Chemistry, Mineralogy, and Geology.

Lewis C. Beck, M. D. Professor of Materia Medica, Pharmacy, and Botany.

The course will commence this season on the third Tuesday of December, and continue until the end of March.

Extracted from the By-Laws.

" The Lectures shall be given after the following arrangement:

Anatomy and Physiology,	through the term,	daily	Fee $10 00
Principles and Practice of Surgery,	do.	do.	" 9 00
Theory and Practice of Physic,	do.	do.	" 9 00
Obstetrics and the Diseases of Women and Children, three days in the week,			" 6 50
Chemistry, Mineralogy and Geology, five days		do.	" 9 00
Materia Medica, Pharmacy, and Botany, three days		do.	" 5 50

" Popular courses of lectures will be delivered in the evening, during the term, by Professor Nott upon Chemistry, and Professor Beck upon Natural and Experimental Philosophy.

" Every student shall pay to the treasurer, at the commencement of the term, Three Dollars, in aid of the contingent fund, before he may be admitted to attend any lectures; after which he shall have the option of taking tickets from such Professors and for such Departments as he pleases.

"Every student who shall have maintained a good moral character; attended to the different branches of medicine at some medical institution, or with some regularly educated physician or surgeon for the space of three years, including lecture terms; diligently attended two full courses of lectures at this or some other authorised medical institution, (the last of which shall be at this;) passed a good examination before the faculty, and delivered in a written dissertation on some medical or philosophical subject, to the approbation of the faculty; shall be entitled to the Degree of Doctor in Medicine, upon procuring a certificate from the treasurer that he has paid into the treasury the sum of twelve dollars as his graduation fee."

In presenting the above to the public, the officers of the Troy Medical Institution undertake to promise the exercise of every necessary effort to secure to the Medical Student, the most approved means and best opportunities of instruction, with the kindness and hospitality of the people of Troy.

DAVID BUEL, Jr. *Secretary.*

November, 29, 1825.

P. S. Respectable board and lodging can be obtained in the city at from $1,75 *to* $2,50 *per week.*

Medical Society of the County of New-York.—At the annual election of this Society, held July 6, 1825, the following officers were elected:

Dr. JOHN ONDERDONK, *President.*
.. THOMAS COCK, *Vice-President.*
.. SAMUEL L. MITCHILL, *Corresponding Secretary.*
.. NICOLL H. DERING, *Secretary.*
.. JOHN S. CONGER, *Treasurer.*
.. JAMES M. PENDLETON,
.. J. KEARNEY RODGERS,
.. JOHN B. BECK, } *Censors.*
.. JOHN C. CHEESMAN,
.. ELBRIDGE G. DUNNELL,

Delegate to the State Society.

.. JAMES R. MANLEY.

At a subsequent meeting Jeremiah Van Renssalær, M. D. was chosen Corresponding Secretary, in the place of Samuel L. Mitchill, M. D. resigned.

QUARTERLY BIBLIOGRAPHICAL NOTICES.

1. *An Essay on the remote and proximate Causes of Phthisis Pulmonalis: being the Essay to which the Prize was adjudged for the year* 1825, *by the New-York State Medical Society.* By ANDREW HAMERSLEY, M. D. of New-York. *With a few Explanatory Notes.* Philadelphia, 1825. 8vo. pp. 54.

THIS is the first Essay to which has been awarded one of the prizes established by a resolution of the Medical Society of this State, at its session in February 1824; and we congratulate Dr. Hamersley upon having been the successful candidate. A subject of more general interest and importance could not have been selected for discussion, than that of consumption; and the manner in which Dr. H. has treated it, does honour, in our opinion, to his industry and acquirements.

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2. *Catalogue of the Anatomical Museum in the College of Physicians and Surgeons of New-York.* By F. G. KING, M. D. New-York, 1825. 8vo. pp. 43.

From this Catalogue we perceive that the whole amount of specimens in the Cabinet of the New-York College, wet and dry, sound and morbid, does not exceed five hundred and ten; a fact which, we suspect, will excite no little astonishment, when it is known that this collection has been accumulating for, we believe, upwards of twenty years, during several of which an annual appropriation of five hundred dollars has been made by the State for its enlargement. As this is a subject in which the public, as well as the profession, are materially interested, we shall revert to it again at a proper period.

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3. *An Introductory Lecture, delivered in the College of Physicians and Surgeons, at the opening of the Winter Session, on the 7th of November,* 1825. By DAVID HOSACK, M. D. &c. New-York, 1825. 8vo. pp. 61.

It is with feelings of deep mortification that we have read this Lecture. The object of it, as avowed by the author himself,—viz. to laud his own College and his brother Professors, at the expense of every other College in the country,—is unworthy of a man of Dr. Hosack's station, and can have no other effect than that of degrading still lower in public estimation the College which he undertakes to eulogize. As a literary performance, it is wholly destitute of merit. The style is loose, inelegant, and sometimes grammatically incorrect. The reasoning in favour of the fancied superiority of the New-York school is, for the most part, perfectly puerile, while many of the statements contained in the discourse are incorrect in point of fact. We sincerely hope that our brethren in different parts of the country, will not consider this Lecture as expressing either the language or the feelings of the profession in this city.

4. *An Epitome of Chemical Philosophy; being an extended Syllabus of the Lectures on that subject, delivered at Dartmouth College. Intended as a Text Book for Students. Part I.* By JAMES FREEMAN DANA, M. D. Concord, New-Hampshire, 1825. 8vo pp. 171.

This work is highly creditable to its author, as well as to the institution to which he is attached. It speaks well for the ample course of chemical instruction which is there given. When the remaining part of the work shall appear, we shall notice it in detail.

5. *Case of three remarkable Tumours extirpated from the Nose.* By P. S. TOWNSEND, M. D. of New-York. New-York, 1825. 8vo. pp. 8.

Want of room in this Number, prevents us from giving an abstract of this pamphlet at present. It shall be given in our next.

6. *A Conspectus of the Pharmacopœias of the London, Edinburgh, and Dublin Colleges of Physicians: being a Practical Compendium of Materia Medica and Pharmacy.* By ANTHONY TODD THOMSON, M. D. F. R. S. &c. &c. First American, from the fifth London Edition: improved by the additions of the United States Pharmacopœia, Majendie's Formulary, and other new Pharmaceutical preparations. New-York, 1825. 16mo. pp. 229.

An excellent Manual of Materia Medica and Pharmacy, useful both to the student and practitioner. The original work is much increased in value, to the American physician especially, by the numerous additions of the Editors, who, we understand, are Drs. Manley and Drake, of New-York.

7. *A Synopsis of the Diseases of the Eye, and their Treatment. To which are prefixed, a short Anatomical description and a sketch of the Physiology of that organ.* By BENJAMIN TRAVERS, F. R. S., Surgeon to St. Thomas's Hospital. *With Notes and Additions*, by EDWARD DELAFIELD, M. D., Surgeon to the New-York Eye Infirmary, and Lecturer on Diseases of the Eye. New-York, 1825. 8vo. pp. 474.

We are exceedingly gratified to see the republication of this valuable work in this country. The anticipations which we expressed in our last Number, in relation to the additions by the American Editor, have been fully realized. They add much, in our opinion, to the value of the work. The typographical execution is worthy of particular commendation, and the plates are exquisitely beautiful.

8. *Pharmacologia; comprehending the Art of Prescribing, upon fixed and scientific principles: together with the History of Medicinal Substances.* By J. A. PARIS, M. D. *With Additions, and Illustrations of the Materia Medica of the United States*, by A. W. IVES, M. D. New-York. 1825. 2 vols. 8vo.

Pharmacologia; comprehending the Art of Prescribing, upon fixed and scientific principles: together with the History of Medicinal Substances. By J. A. PARIS, M. D. *With Notes and Additions.* New-York, 1825. 1 vol. 8vo.

Nothing can show more strikingly the merited popularity of the Pharmacologia in this country, than the fact of two different editions being simultaneously published. This makes four American editions of the work.

9. *The Medical Formulary: being a Collection of Prescriptions, derived from the writings and practice of many of the most eminent Physicians in America and Europe. To which is added, an Appendix, containing the usual Dietetic Preparations and Antidotes for Poisons. The whole accompanied with a few brief Pharmaceutic and Medical Observations.* By Benjamin Ellis, M. D., Lecturer on Pharmacy. Philadelphia, 1825. 8vo. pp. 148.

10. *Manual of Surgical Operations; containing the New Method of Operating devised by* Lisfranc; *followed by two Synoptic Tables of Natural and Instrumental Labours.* By J. Coster, M. D. and President of the University of Turin. *The Translation and Notes* by John D. Godman, M. D., Lecturer on Anatomy and Physiology. Philadelphia, 1825. 12mo. pp. 265.

Dr. Godman has rendered the profession an essential service in the translation of this excellent work.

11. *The American Medical Review, and Journal of original and selected papers in Medicine and Surgery.* Conducted by John Eberle, M. D. Nathan Smith, M. D. George Mc'Clellan, M. D. and Nathan R. Smith, M. D. Philadelphia, for September 1825. No. 5. In exchange.

We are much pleased with the appearance of this number, and have no doubt that the talents and learning of its editors will very speedily procure for this work a distinguished place among the cotemporary journals of our country.

12. *Litterarische Annalen der gesammten Heilkunde herausgegeben von* Dr. Justus F. C. Hecker, Professor der Heilkunde an der Universitat Berlin, &c. For March, April, May, June, 1825.
In exchange.

13. *Magazin der auslandishen Literatur der gesammten Heilkunde und Arbeiten des ærztlichen vereins zu Hamburgh herausgegeben von* Dr. G. H. Gerson, und Dr. Nikol. Heinr. Julius. Four numbers from January to September, 1825.

We find that this Journal contains regular analyses of papers which have appeared in the New-York Medical and Physical Journal. It is highly gratifying to us to be the means of giving so wide a circulation to the valuable labours of our correspondents.

14. *The Medico-Chirurgical Review.* Conducted by associated Physicians and Surgeons, and superintended by James Johnson, M. D. &c. No. 22. for October.

In exchange. We feel greatly indebted to Dr. Johnson, for the many flattering notices which he has taken more especially of the New-York Medical and Physical Journal, and for the general spirit of liberality which he has shown towards the labours of his professional brethren on this side of the Atlantic. In his 21st number, besides analytical notices of Dr. Coventry on Bronchocele, Dr. Delafield on Paralysis, Dr. J. B. Beck on

Laryngitis, we are pleased to find that he has given a review of the work on Epidemics by our fellow-citizen Dr. Joseph M. Smith, of which he speaks in terms of very high, and as we think, merited praise.

NOTICES.

UNIVERSITY OF THE STATE OF NEW-YORK.

The two Colleges of Physicians and Surgeons attached to the University, commenced their annual courses of lectures at the usual time. The number of students attending the college in this city, is one hundred and sixty-four; that of the college at Fairfield, is one hundred and thirty-five.

New-York City Dispensary.—The Annual Report of the Trustees of this institution, just published, presents a very gratifying statement of the successful efforts made during the last year, to relieve the distress from disease of a large and helpless portion of our rapidly increasing population. The number of patients treated by the physicians is not far from eight thousand—and of these, only seventy-two died. We are also able to state, that the diseases of the out-door patients have been divided into five classes, each of which is attended to by two physicians, at different hours during the day. It is likewise intended by the physicians to publish hereafter a Quarterly Report of the diseases of the institution—which cannot fail to prove at all times a valuable and interesting document.

The Academy of Medicine of New-York.—An Association devoted to the cultivation of Medical Science and its collateral branches, has just been founded in this city. Its members are divided into four classes, to each one of which, distinct departments are assigned for the more successful prosecution of the objects of the institution. The following are the subjects designated for each of the classes:

To the *first* class, Theory and Practice of Medicine, Ethics, and Police.

To the *second* class, Anatomy, Surgery, and Obstetrics.

To the *third* class, Physiology Experimental and Comparative, Pathology, and Morbid Anatomy.

To the *fourth* class, Materia Medica, Chemistry, Medical Jurisprudence, and Natural History.

At the first election held on the 16th ult. the following gentleman were elected officers for the ensuing year:

Felix Pascalis, M. D. *President.* John B. Beck, M. D. John Watts, Junr. M. D. John Stearns, M. D. Joseph M. Smith, M. D. *Vice-Presidents.* Daniel L. M. Peixotto, M. D. *Secretary.* Samuel W. Moore, M. D. *Treasurer.* John K. Rodgers, M. D. *Curator.*

The general plan of the Institution is such, as we feel confident will command the approbation and support of the profession. To the activity and diligence of its members we look forward with great hopes, and their labours shall always command a prominent department in the pages of this work.

State Medical License.—Candidates wishing to obtain licenses to practise Medicine and Surgery, are informed, that the Censors of the State Medical Society for the Southern District will hold their examinations in the city of New-York. They are requested to apply to either of the censors.

FELIX PASCALIS, M. D.
CHARLES DRAKE, M. D. } Censors.
JOHN B. BECK, M. D.

TO READERS AND CORRESPONDENTS.

1. In the November number of the Philadelphia Journal of the Medical and Physical Sciences, we find the following notice. " The extract from Dr. Wiltbank's observations on the action of the heart, quoted inadvertently from 'Anderson's Quarterly,' in our respected cotemporary the New-York Medical and Physical Journal, is from a paper originally published in this Journal last winter. p. 198." The editors do us justice in attributing this to inadvertence, and we are willing to ascribe to the same cause a similar omission on their part. In the very same number in which they complain of us, they review " an Essay on Conception and Superfœtation," by Dr. John Stearns, and omit inadvertently to mention that the Essay was published in the last number of our Journal.

2. In compliance with the request of Dr. Nathan R. Smith, one of the editors of the " American Medical Review," we have republished from that work, the paper of Professor Smith on fractures of the Femur. We have the more readily complied with this request, although contrary to our usual practice, because we felt desirous of giving a wider circulation to so valuable a contribution to surgical science.

3. It is intended hereafter to devote, under a distinct department, some pages in almost every number of our Journal, to the interesting and important subject of Medical Jurisprudence. It shall consist of original Essays, reports of trials, notices of foreign and domestic works on this subject, &c. In conducting this part of the work, the editors are gratified to state, that they have been promised the most liberal assistance from Dr. T. Romeyn Beck of Albany.

4. Our next number will contain communications from Drs. Manley, T. R. Beck, Townsend, Heustis, Fountain, Rev. Dr. Ducachet, &c.

A CARD.

☞ DR. STEARNS respectfully requests the Editors of the *Medical Recorder* not to assign that as an objection to his theory of Conception, which he considers at variance with its fundamental principles, an insuperable impediment to its success, and a prominent cause of sterility. He also begs leave to refer them to the article on Ergot, in the 666th page of the fifth volume of the Recorder.

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ERRATA IN No. XV.

In Dr. Fountain's paper—page 331, seventh line from bottom, for *ones* read *ores*.

Page 352, line eleventh from top, for *should operate* read *should not operate*.

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